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TRANSACTIONS

OF THE

FIFTY-NINTH SESSION

HELD AT

BOSTON, MASSACHUSETTS, JUNE 22-27, 1903

EDITED BY

CH. GATCHELL, M. D., SECRETARY

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(SEE TRANSACTIONS OF 1881, PP. 23, 68 AND 71)

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BOSTON, MASSACHUSETTS, JUNE 22–27, 1903

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BOSTON, MASS., JUNE 22, 1903

FIRST DAY

The Fifty-ninth Annual Session of the American Institute of Homeopathy was called to order by President Joseph P. Cobb, M. D., of Chicago, Illinois, at 4:00 P. M., in the New Ball Room of the Hotel Somerset, Boston, Massachusetts.

In opening the proceedings the President addressed the Institute as follows:

President's Preliminary Address.

Ladies and Gentlemen:—By virtue of the power invested in me as your presiding officer, I hereby declare the fifty-ninth annual session of the American Institute of Homeopathy opened for the transaction of such business as may properly come before it.

I desire to take this my first opportunity to express to you my appreciation of the high honor which you have conferred upon me, and the confidence which you have reposed in my executive ability by electing me to fill the highest office at your disposal.

It is gratifying to be able to announce to you that the Chairmen of the Bureaus and Committees appointed by my predecessor in office have been assiduous in their efforts to do the work assigned to them; that they have promptly and courteously responded to all requests, appeals and communications from the Executive Committee. We regret to announce that illness has prevented the Chairman of the Bureau of Clinical Medicine from doing any active work since the beginning of the year; the Secretary of the Bureau has acted for him in the formation of the Bureau.

The local Committee of Arrangements began their work of preparation immediately after the close of our last session and have continued persistently since that time to labor for your interest. As a result very complete arrangements have been made; every request of the Executive Committee has been executed, and often amplified in the execution.

To all of these officers and to all of the members of the Local Committee of Arrangements, the Executive Committee, through me, desires to express its appreciation for their co-operation and its acknowledgment of their earnest assistance.

By reason of the adoption at our last session of a new constitution and by-laws the routine work of this session will be materially changed. For the same reason the Executive Committee have been

forced to meet a new set of problems and to arrange a new schedule of work. Every question has been decided upon its merits as we saw them, and when possible each member of the Executive Committee has been consulted.

We appreciate the fact that there will be plenty of opportunities for criticism, and we shall welcome the criticisms if they will be of help to our successors.

A prominent place on the program has been assigned for the opening session of each Bureau, with plenty of time later for the Bureau to complete its unfinished work.

An effort has been made to assign to each section all of the time which was requested for it bv its officers and as far as practicable to prevent over-lapping of sections in which many members of the Institute hold double membership.

We trust that the program to be presented will meet with your endorsement and that it will prove in the main satisfactory to all.

In studying the position and condition of our school of medicine to-day the conviction has been forced upon me that our greatest need at present is organization. Less than one-fifth of the homeopathic physicians of this country are members of the Institute; less than one-third are members of State societies; few County or City societies are doing regular, systematic and effective work. The self-satisfied apathy within our own ranks is our most dangerous enemy. Consider the herculean efforts that the dominant school is putting forth toward the consummation of a systematic organization; observe the magnitude of the results thev are accomplishing in this direction. Reflect on what this means. They have now the most powerful medical organization the world has ever known, and still they are growing; in some months they have added 1,000 new names to the membership of their National society. Their official journal, started under dire prophecies of failure, has built up a fund of over $100,000. A paid organizer is employed at a liberal salary. An edict of the central body reaches into nearly every county of the United States with the force of a command. Contrast this with the indifferent support our National organization receives and our inability to control any concerted action, except in a few limited districts.

I would recommend that the Committee on Organization take active and energetic measures to foster the growth of local, State and National societies.

I would further recommend that, to establish a more intimate connection between the Institute and the State societies, membership in a State society be accepted in lieu of the usual initiation fee required by the Institute. I would also recommend that the Committee on Organization urge through the officers of the State societies a tributary control of local societies, with the object of fostering their growth and increasing their usefulness.

In some way it should be brought home to every member of our profession that it is his duty to take an active interest in local, State and National legislation. Legislative Committees often fail in their work for lack of support by the profession, and consequent lack of

popular sentiment. The large majority of our profession are too busy looking after their own personal interests to realize that they owe any allegiance to the school or to the profession; they are willing to accept the fruits of other's work, but are unwilling to contribute any effort to the common cause.

Two propositions to amend the constitution and several propositions to amend the by-laws will come up for action to-morrow morning.

Amendments to the constitution and to the by-laws are always important questions and I trust that they will receive your careful thought and action. The greatest latitude of time that is possible will be accorded to those desiring to address the Institute on these questions.

The business sessions of the Institute will be called to order promptly at the time designated on the official program; they will also be adjourned with the same precision, in order that there shall be no encroachment upon the time of the Bureaus.

I crave your indulgence in advance for errors of which I may be guilty, and promise that it shall be my aim to be impartial, just and accurate.

THE SECRETARY, Dr. Ch. Gatchell, announced as the Committee on President's Address, Drs. J. P. Rand, Monson, Mass.; W. A. Dewey, Ann Arbor, Mich., and A. P. Hanchett, Council Bluffs, Iowa.

THE PRESIDENT then called for the report of the Executive Committee, which was submitted by the Secretary.

DR. GATCHELL submitted as his report the program as printed and sent to all members of the Institute. He reported that a formal meeting of the Executive Committee had been held in Chicago in January, at which meeting five members were present, the particular business being the outlining of the program. The Executive Committee recommended that this program be adopted as the official program of the Institute.

On motion, duly seconded, it was so ordered, and the program was adopted as the official order of business.

THE SECRETARY read the report of the Committee on Publication, which was as follows:

REPORT OF COMMITTEE ON PUBLICATION.

The Publication Committee respectfully submits the following report:

The edition of the volumes containing the Transactions of the Institute of the session of 1902 was issued from the bindery Sept. 15th, 1902. The cost to the Institute of printing and binding the edition was $1,598.37. But it is necessary to explain that these figures would have been greater by several hundred dollars but for the fact that the Secretary successfully resisted payment of this amount, for the reason that the printer failed in some respects to carry out his agreement, which resulted in a delay in issuing the volume of fully two weeks.

GEO. F. SHEARS, *Chairman,*
JNO. R. KIPPAX,
CLARENCE BARTLETT.

On motion of Dr. E. B. Hooker the report was accepted.

In the absence of Dr. B. F. Bailey, of Lincoln, Neb., Chairman of the Committee on Resolutions and Business, the President appointed Dr. J. C. Wood, of Cleveland, Ohio, as Chairman, and also increased the number of members from three to five, the additional appointees being Dr. J. B. G. Custis, Washington, D. C., and Dr. Geo. F. Shears, Chicago.

Drs. H. H. Baxter, of Cleveland, and D. A. Strickler, of Denver, Colo., were appointed by the President to fill the vacancies on the Board of Censors.

Dr. George B. Peck, Chairman of the Board of Censors, reported a list of forty-five names of applicants for membership.

This report was ordered by the President, in accordance with the by-laws upon the subject, to be posted for six hours preparatory to the election to membership.

The report of the Committee on Local Arrangements was made by the Chairman, Dr. John P. Sutherland, as follows:

Dr. Sutherland called attention to the report of the Committee contained in the printed official announcement, and to the bulletin distributed to every homeopathic physician in New England. He said also that the report of the Committee would be given out in detail as the hours and days went by.

On motion it was ordered that the report of the Committee on Local Arrangements be accepted.

The President then announced that the Inter-Collegiate Committee would hold a meeting for organization on Wednesday, at 2 P. M.

The Secretary read a communication from Dr. Mann, Director of the Massachusetts Homeopathic Hospital, inviting the members of the Institute to visit the hospital.

On motion of Dr. Pemberton Dudley, duly seconded, the invitation was accepted with thanks.

Dr. Hiram L. Chase, President of the Senate of Seniors, invited the members of the Institute to attend a meeting of the Seniors to be held Tuesday, June 23rd, to hear a paper by a member, Dr. M. O. Terry, on "Ethics."

There being no further business the President adjourned the meeting until 8 o'clock in the evening.

OPENING EXERCISES

MONDAY EVENING, JUNE 22

The opening evening exercises of the Institute were held in the new ball room of the Hotel Somerset, beginning at 8 o'clock. The hall was filled with a distinguished assemblage of members of the Institute, their wives and friends, scientists and professional men, and prominent citizens of Boston.

Among those seated on the platform when the presiding officer of the evening, Dr. J. P. Sutherland, Chairman of the Local Committee, called the meeting to order, were the following: President, Joseph P. Cobb, M. D.; First Vice President, H. F. Biggar, M. D.; Second Vice President, M. Belle Brown, M. D.; General Secretary, Charles Gatchell, M. D.; Hon. John L. Bates, Governor of Massachusetts; Edward Everett Hale, D. D.; Surgeon-General Blood; Major A. R. Hooper; Major W. M. Clarke; ex-Presidents O. S. Runnels, M. D.; J. H. McClelland, M. D.; J. B. Gregg Custis, M. D.; A. B. Norton, M. D.; C. E. Walton, M. D.; J. C. Wood, M. D., and others.

The music for the occasion was furnished by Swansbourne's orchestra.

The stage was handsomely decorated with flowers and drapery, and the ball room presented a picture of great beauty. Altogether the scene was a brilliant one when Dr. Sutherland arose and said:

"The American Institute of Homeopathy is honored in being permitted to listen to an invocation of the divine blessing on its work by the Reverend Edward Everett Hale."

REVEREND EDWARD EVERETT HALE.

Will you join with me in prayer?

Father of Life,
Father of Love,
We are here together,
And, best of all,
Thou art with us.

We are here
To consecrate ourselves anew
To Thy service,
Entering into that work of Thine
To which Thou hast called us.

Are we not all
Thy Children?
Are we not all
Partakers of the Divine nature?

Can we not come
As so many children,
North and South,
East and West,
To lift up
Those that are fallen down,
To open the eyes
Of the blind
And the ears
Of them that are deaf,
To feed the hungry,
To clothe the naked,
And to carry glad tidings
To those who are in need?

And now, Father,
We ask Thee to give us of
Thine own omnipotence;
To lead us by
Thine own hand;
To inspire us by
Thine own holy spirit,
That we may go about the duty
To which we have pledged ourselves

In that service;
That we may be followers of
Him who went about doing good,
Entering into
Thine infinite harvest fields,
Which are white for the harvest.

And we do not pray for
Ourselves alone.
We pray for
Those who have given themselves
To the service of man,
And so
To the service of God;
For those who would make
The bodies and the minds stronger;
For those who would try
To get nearer to Thee,
And to bring others
Nearer to Thee.

So be pleased to bless
The science of the world,
That all science may go forward
With the knowledge that
God is willing
To give of His Wisdom
To each and all of His children;
And thus, Father, that
Thy Kingdom may come,
And may come every day nearer
And nearer, that
Thy will may be done
On earth
Even as it is done by
Thine angels who are
In Heaven.

Bless all of us;
Bless all who are
Associated with like motives;
Bless all Thy children, and
Reveal Thyself to the world as
The Father
Of each and all of us.

We ask it in the name of
Christ Jesus.

AMEN.

DR. JNO. P. SUTHEBLAND: Ladies and Gentlemen, those of you who are at all familiar with the map of Massachusetts will recall how on the eastern border there extends a long arm out seaward. As to what there is at the end of that arm opinions have differed. Certain gentlemen once seemed to see at the end of that long arm a clinched fist. Perhaps that is why no one wearing the uniform of an enemy has for over a century and a quarter sailed up Massachusetts Bay. Those of us who once have learned to love our brave old puritan commonwealth, when we turn our faces homeward from wandering over sea, behold a great hand beckoning us home. You who are Massachusetts' guests to-night, I am sure will know that great hand only as beckoning you with the kindest and faithfulest welcome to our old Bay State. It is our happy fortune to have that welcome voiced by the latest honored comer into the list of Massachuetts' famous chief magistrates. It is my privilege to present to you his Excellency, John L. Bates, Governor of Massachusetts.

Governor Bates was received with applause, and spoke as follows:

MR. PRESIDENT, LADIES AND GENTLEMEN: We would much rather you would consider Cape Cod as the emblem of Massachusetts' hospitality than as the emblem of her defiance to the world. When the Pilgrims landed on that part which we call Plymouth, it is recorded that the first words that were said to them by the inhabitants of this land at that day were, "Welcome, Englishmen." And thus the red man greeted the white man. He is supposed to have learned so much of our language from the early traders who had come and gone from

these shores. But from that day to this we people who live in Massachusetts like to think that the "Welcome" legend has always been hung out for all who come this way. It is true that during the seventeenth century our forefathers had a few lapses from this spirit of hospitality; and Roger Williams, and a Quaker or two, and a few witches, whom we always implore to stay with us now rather than try to get rid of them, felt that this was a cold country. But, so far as I know, none who has come here since has failed to find a warm, hospitable reception, and it is such that we would tender to you.

I might say that I voice the feelings of pleasure of our people, that you come here to talk, and not to practice. (Laughter.) To almost every other kind of a profession we say, "Practice, rather than preach;" but so far as the physicians are concerned, we had always rather they would preach than practice on us. But knowing that you have come for this purpose, we welcome you, because we believe much good may result from your deliberations. Boston is peculiarly fortunate this week. She is to have a great celebration to dedicate a monument to one hero in particular of the civil war, but also because she would thereby commemorate the services of them all; and among others she is to have the privilege of entertaining the remnant of that Great Army of the Potomac that for four years contested every inch of ground between Washington and Richmond with another great and powerful army.

These are fighting men. With musket and with sword they went forth in our interest. They returned victorious. We honor them for their courage, for what they did, for what they have given to us. But I feel, as I look into the faces of this audience, that I am permitted the great pleasure of welcoming another kind of fighting men; men who belong to a noble profession, that not only requires skill and learning and deep research and profound thinking, but that also requires courage and bravery, requires meeting insidious enemies, always on the firing line with unseen but powerful foes in the conflict against them. It is a pleasure to welcome you as belonging to an unselfish profession that has devoted itself to the welfare of humanity. I welcome you to Massachusetts. We trust that as the result of this great convention much good may come to all our fellow citizens, and that you may receive a great share of pleasure and of profit from your stay among us.

Dr. Jno. P. Sutherland: Our Western brethren, it is said, have a legend that the Boston man's idea of hospitality is to extend chilly finger-tips to a friend, and offer him a seat in the family pew should he chance to be in town over Sunday. We want our brethren, Western and otherwise, to go home from our three-hilled rebel town with quite a different report of what a welcome to Boston really means. We are disappointed to-night in that this welcome to Boston cannot be expressed by our honorable Mayor in person. He is not able to be here, but he has thought of us, and he has sent us a letter which will be read by Dr. Frank C. Richardson.

The Mayor's letter was greeted with applause, and was as follows:

CITY OF BOSTON.

OFFICE OF THE MAYOR.

JUNE 20, 1903.

DR. JOHN P. SUTHERLAND,

295 Commonwealth Avenue, Boston, Mass.

DEAR SIR: I regret exceedingly that my official engagements will deprive me of the pleasure of extending verbally and in person the welcome to the delegates attending the convention of the American Institute of Homeopathy, which I wish to convey to them through the medium of this note.

Boston, with her broad catholic spirit, gladly welcomes all gatherings and assemblies organized for scientific research, the promotion of learning, or the dissemination of useful knowledge. In extending a friendly greeting to such bodies she ignores artificial lines of division or delimitation, and recognize only their lofty purposes and their honorable achievements.

In this spirit I greet the delegates, wishing them a most successful convention and an enjoyable visit to the historic City of Boston. I am, very truly yours,

PATRICK A. COLLINS, *Mayor.*

DR. JNO. P. SUTHERLAND: Mr. President, members of the American Institute of Homeopathy: Massachusetts has spoken its official welcome to you. Boston has sent its greeting. It but remains for homeopathy to speak to you its words of hearty gladness that you are here to bring to it the vital inspiration of its honorable homeopathic beginning from the length and breadth of our great country. To me falls the duty and the honor of speaking to you for the homeopathy of Massachusetts. Fortunately, you need no halting words of mine to tell you how the homeopathy of Massachusetts welcomes you here to-night. You have but to look about you for manifestations of that welcome, for the homeopathy of Massachusetts means more than a band of medical practitioners; it means the great cause itself, as it speaks in the work of the practitioner, in the loyalty and faith of the laity, in the labor of the institutions that serve you. It is as the representative of these various elements that I appear before you. Only three times in the history of the Institute has it come to claim Boston's hospitality. It is thirty-four years since its last claim was made. The pent-up hospitality of a third of a century is yours to claim, and I trust you will receive and enjoy it as whole-heartedly as it is offered. That it is not more frankly recreative in character is due, as you may well guess, to the stern reminders poured out and spared not by our Executive Committee that we must remember that our Institute's sessions are primarily scientific and not social in aim and accomplishments. Therefore, we have yielded to science many an hour that we would gladly have filled with ministrations to your pleasure. But alike in work and play, believe that the affectionate welcome of Massachusetts' homeopathists follows your coming and your going with desire of entire service and gladness in being permitted to serve. Those of you—and they are, happily, not few— who

were in Boston thirty-four years ago, will find that homeopathy has not labored unfruitfully among us. You were sped, in that far time, by a handful of physicians, and scarcely more of laity, who had faith in their works. To-day you are welcomed personally and by representatives by over nine hundred Massachusetts physicians, by a laity whose numbers reach upward of half a million. You left a small hospital and dispensary in one building, laboring with scant facilities in its circumscribed space. You find a noble hospital with two hundred and twenty-five beds, that cares successfully for over three thousand patients annually, and a great dispensary wherein there were treated last year upwards of nineteen thousand patients. You left no educational institution. You find a medical school that is greeted on its commencement day by nearly one thousand alumni. You will miss, as we never cease to miss, many of those who then greeted you. You will miss, as we daily miss, words of inspiration and guidance from those brave hearts that conquered for us the field on which New England homeopathy stands so securely to-day. There is a stern old epitaph in Westminster Abbey that says, "God buries His workman and goes on with His work." Many of His workmen have passed from among us, but the work, as you will, I trust, see for yourselves, goes strongly on, and goes on in the spirit of those who left it. It is to scenes of their labor, it is in their names no less than our own, that we bid you welcome. Words are futile. Let Massachusetts homeopathy prove to you every hour of every day you honor her with your presence how highly she prizes your presence. So she speaks to you in brief, inadequate words. In the better speech of the deed let her speak to you to-night, this week, and forever. (Applause.)

At the close of his address of welcome Dr. Sutherland introduced the President of the Institute, Dr. Joseph P. Cobb. He said it ought to be superfluous to introduce the President, but as there were present many guests who had not had the pleasure of meeting him, he took pleasure in presenting Dr. Cobb of Chicago, President of the American Institute of Homeopathy.

Dr. Joseph P. Cobb spoke as follows:

DR. COBB'S REPLY TO ADDRESS OF WELCOME.

MR. CHAIRMAN, YOUR EXCELLENCY, YOUR HONOR, LADIES AND GENTLEMEN OF BOSTON:

Thirty-four years ago, the American Institute of Homeopathy met for the third time in this historic city and celebrated its twenty-fifth anniversary.

The same generous hospitality which you extend to us to-day was accorded to the Institute at that time. Invitations were received and accepted to visit the Massachusetts Institute of Technology, the Boston Society of Natural History, the Boston Athenaeum, and the Schoolship "George M. Barnard." A special invitation was given by the Board of Trustees of the Public Library of the City of Boston to visit the same. A revenue cutter was placed at the disposal of the Institute by the Collector of the Port of Boston for a trip down the harbor.

The municipal authorities made a generous appropriation to entertain the Institute as the guests of the city at a brilliant reception, presided over by the Mayor of Boston, the Hon. M. B. Shurtleff.

The Massachusetts Homeopathic Medical Society entertained the Institute and a few invited friends at a sumptuous dinner in Horticultural Hall.

It was the unanimous opinion of the Institute at that time that there was but one Boston, and that there had never before been such a meeting of the Institute. It is evident that there is still but one Boston. Proud and happy are we to be her guests.

In returning to Boston after this long interval of time for our annual reunion, we are again reminded of those exalted principles which have always animated this community. Boston has been the birthplace of liberty, of freedom and of the right, in nearly all of the high principles for which our government stands.

Nowhere else in the United States has homeopathy enjoyed among the laity more loyal friends, more earnest supporters, more conscientious investigators.

Two of our medical journals, "The Medical Century" and "The North American Journal of Homeopathy," have, in their June issues, paid a deserved tribute to the loyal friends of homeopathy in this commonwealth.

On the honor roll of this Institute there stands a long list of names of your sons and daughters, who have helped to carry our banner onward to success.

Few of those who took an active part in the work of that session, either as hosts or guests, are with us tonight. Your own indefatigable Talbot, who was Secretary of the Institute during that meeting, in 1869, joined the silent majority four years ago.

At that time, there were in Boston only fifty-eight homeopathic physicians; in Massachusetts about three hundred; in New England less than seven hundred; in the United States about three thousand. To-day there are one-half as many homeopathic physicians in this commonwealth as could be counted in the whole United States in 1869.

Of the twenty homeopathic colleges of to-day, only six were organized and at work at that time.

Your own well-known representative of our faith, the Boston University School of Medicine, was opened to students four years later, in 1873.

In Scott's Circle at our National Capitol, there stands in stone and bronze an enduring monument to homeopathy and to the illustrious Samuel Hahnemann.

Not less enduring are these monuments, the Boston University School of Medicine and the eleven homeopathic municipal hospitals which the citizens of this commonwealth have created and which generations to follow will foster and enjoy.

In 1869, the Institute numbered only five hundred and eleven members; the homeopathic profession about three thousand; the clientele of our school less than five million. To-day the Institute has nearly twenty-five hundred members; more than fifteen thousand homeo-

pathic physicians enjoy an honorable position in this country, while the clientele of our school now numbers more than fifteen million.

We who are gathered here this evening, Mr. Chairman, disciples of the illustrious Hahnemann, are but representatives of this great homeopathic following.

In the name of all of these friends and believers in the science of homeopathy, I thank you for your cordial welcome.

DR. JOSEPH P. COBB, President of the Institute, then delivered his opening address as President. The address was as follows:

DR. COBB'S OPENING ADDRESS AS PRESIDENT.

Mr. Chairman, Members of the American Institute of Homeopathy, Ladies and Gentlemen: Custom has decreed that your presiding officer shall deliver an address at the opening of each annual session of the Institute. It is expected also that the speaker shall discuss subjects of interest to all, and of vital importance to our school; that his efforts shall advance the cause of homeopathy, awaken new interest in your minds and perchance open new avenues for advance into the minds of our brethren of the dominant school of medicine.

In approaching this important duty of my office I have been made to feel very forcibly my own limitations and to realize that the position of president of this Institute carries a large burden of responsibility.

Two subjects stand out preëminently important at all times; just now they seem to overshadow all others in their importance to us: First. The position and condition of homeopathy to-day. What can we do to advance the one and improve the other? Second. Medical education. What does it demand of us?

At the last session of this national convention at Cleveland my predecessor in office, President James C. Wood, delivered an address upon "The Present Status of Homeopathy." In an eloquent and forceful manner he presented to you a resumé of what homeopathy has done, defined its position to-day and pointed out our obligations toward the future. Fearing that you have not read, as recently as I have, this valuable contribution to our literature, and that some of you may not recall the facts and arguments it contains, I shall do myself the honor to recapitulate parts of this address for you to-night.

In a masterly manner President Wood demonstrated "the influence which homeopathy has had upon the medical thought and practice of to-day as represented by the dominant school of medicine." His arguments were the statements, admissions and practices of leading members of the dominant school as gleaned from the writings of their recognized authorities down to the present day. He showed you "that homeopathy had not yet fulfilled its mission"; "that the time had not arrived when we should give up our distinctive title"; that to give up our distinctive organization to-day would be to bury the truth of homeopathy in a grave that had been dug for it. He showed you that "homeopathy had not been losing in numbers, in prestige or in popularity," as has been claimed by some of our detractors; that, on the contrary, the growth of the homeopathic school has been remarkable.

History demonstrates that we have about doubled our numbers every fifteen years. The first homeopathic prescription was made in this country in 1825; to-day we are over 15,000 in number. In 1829 Dr. Oliver Wendell Holmes, a truly great man and a beloved son of the commonwealth, a renowned teacher in the greatest university of this country, indulged in the prophecy that homeopathy was but a passing fad, and that in forty years there would not be left a single homeopathic physician in these United States. Yet just forty years after his prophecy, in 1869, this Institute met here in Boston for the third time; its opening session was presided over by the mayor of this city, it was feted as the guest of this city, and it represented about 3,000 practitioners. To-day, thirty-four years later, we number over 15,000 regularly graduated and licensed physicians.

When you are inclined to indulge in gloomy forebodings concerning our numerical strength as compared with that of the dominant school, when the spirit of unrest seizes you and the siren voice of the larger body lures you on, take your pencil and from the history of the past seventy-eight years figure out the future of the homeopathic school at the end of one or two more generations of this kind of growth.

It is true that the tendency of the age in manufacturing and commercial pursuits is toward amalgamation and the formation of trusts. Does it necessarily follow that a consummation of this tendency is for the best interests of the people and of the world? Under what conditions did the industries of this country originate? Foreign oppression and dire necessity; self-preservation was the instigator. Under what conditions did these industries become world powers? Competition and a determination to surpass all competitors.

Homeopathy was born when the practice of medicine had, for over a thousand years, failed to make any substantial progress. It lived in spite of persecution; it has grown under a competition at first bitter, then tolerant, to-day healthy and almost generous.

To me the future has no gloomy forebodings. I do not believe that all of our scholars are dead. I cannot agree that the last generation were better men, better homeopaths or better physicians than we are to-day. I can imagine that future generations will point to some of our marked men with the same pride and loving remembrance with which we commemorate our Talbot, our Allen, our Pulte, our Hughes, our Dunham, our Small, our Holcome, our Ludlani, and hosts of others.

Think you that these men who loved homeopathy, who were proud to be known as Hahnemann's followers, who put the best of their lives into their professional work, lived and labored in vain? Think you that they left homeopathy where they found it? On the contrary, you agree with me that they stand out preëminently for the good fight which they made. We love them for their personality; the world admires them for their work. Our birthright is the fuller and broader homeopathy which they bequeathed to us.

Has the end of progress been reached with us? Is the earnest and loyal work of this Institute ended? Are the 15,000 homeopathic physicians of to-day indifferent to the truth? Read the answer in your own mind.

Healthy and generous competition in all pursuits is desirable. I believe that it would be an unfortunate thing for the art and science of medicine should there cease to be two distinctive schools.

We are all agreed that homeopathy has influenced the dominant school in suppressing gross polypharmacy and blood-letting; in the abuse of emetics, cathartics and the cautery. Can we not also claim that the truth of homeopathy, that our persistent and consistent faith in our law of similia has forced the broader minds in the medical world to hunt for facts, to examine their tenets and their practice, to formulate new theories, to discover that their theories were untenable and to search anew for the truth? Parts of the truth they have found and other parts they are finding. Because we have a truth which a century's use leaves shining with all of its pristine luster, it does not follow that we have all of the truth. The homeopathic school has learned many things in the art and science of medicine of which Hahnemann had no conception; to the dominant school of medicine directly we are indebted for some of these truths; indirectly they have been the stimulus which has forced us to closer, deeper study, to a better grade of work, to greater achievements and to a higher standing. Self-preservation, competition and the ambition to excel our competitors are as powerful incentives to a school as they are to individuals. If the law of similia had been accepted by the medical world when Hahnemann promulgated it, I doubt if there would have been as many good homeopaths to-day as there now are? I doubt if homeopathy would have remodeled the art of medicine to the same extent that we believe it has! I doubt if the art or science of medicine would have reached the advanced position which we to-day behold. What is to be gained by a union? Why should we talk, discuss or think of losing our identity? Is our special distinctive work done? What is the position of homeopathy in those countries which have no distinctively homeopathic schools?

We are called a sect in medicine and at times we seem to be willing to be so styled. With this doctrine, with the limitations inferred by this statement I wish to take issue. This Institute officially says: "A homeopathic physician is one who adds to his knowledge of medicine a special knowledge of homeopathic therapeutics and observes the law of similia. All that pertains to the great field of medical learning is his, by tradition, by inheritance, by right.

That is not a sectarian definition! Could anything be more catholic? It infers that we investigate, that we study, that we master the whole broad field of medicine; that we collate all of its facts, study all of its records, try all of its theories in the crucible of practice, and accept all that rings true. Do we always live up to this creed? Are we always free from bigotry and prejudice?

The late Dr. W. H. Holcome, educated in the old school, saturated by the prejudices of inheritance and early training, was forced against his inclination by the logic of facts he candidly examined to become a convert to our ranks. His definition of "What is homeopathy?" is equally as unsectarian as the Institute's definition of "a homeopathic physician," is equally as deserving of prominence and repetition. Let

me recall it for you. "Homeopathy is a part of medical science. It is not medicine, but a reform in one of its departments. It has no new anatomy, or chemistry, or physiology. It has no new obstetrics, or surgery, although it has made great improvements in the medical treatment of surgical and obstetrical cases. It has no new pathology, or hygiene or sanitation. It shares all these things with the allopathic school. Its sphere is therapeutics; its works a new application of medicines to diseases. And even then it relates only to the dynamic or vital action of drugs, leaving all other points of practice open questions. It utilizes the sciences of toxicology and pathology in a manner impossible before the discovery of the law *similia similibus*. In fine, it discards nothing in medical theory or practice except when it can put a better thing in its place."

These definitions stamp us as nonsectarian, as untrammeled by any limitations. With equal force they demand that we shall be catholic; that we shall be ready to investigate, that we shall be open to conviction. Homeopathy stands for a truth which we believe is the expression of one of nature's laws, as immutable as the law of gravitation, of magnetism, or of chemical affinity, as impossible to explain as the law of gravitation, as little understood as the law of magnetism, as kaleidoscopic in its manifestations as the law of chemical affinity.

Within the memory of most of us three new theories to explain the law of chemical affinity have come and gone; the fact still remains that the union of two units of hydrogen with one of oxygen produces a molecule of water and that the union of one unit of carbon with two of oxygen produces a molecule of carbon dioxide gas. Hypotheses come and remain only so long as they seem to explain; they are discarded when controverted by facts—facts, if facts—truths stand for all time.

Dr. Oliver Wendell Holmes in discoursing upon the truth says, "Truth is tough. It wil not break, like a bubble, at a touch; nay, you may kick it about all day, like a football, and it will be round and full at evening." Certainly the law of similia fulfills these conditions. Is there any other rule or precept in the application of medicine to diseased condition that has stood this test during any large part of the century just closed?

President Wood in his address last year pointed out to you the chaotic state in which the therapeutics of the dominant school are to-day; showed you by quotations from Goodhart, Osler and other modern writers of that school the growing "agnosticism and uncertainty which characterizes the therapeutics of that school"; compared this condition with "the precision and the permanency of the therapeutics of the homeopathic school."

Dr. Frank Billings, of Chicago, president of the American Medical Association, in the presidential address delivered at the fifty-fourth annual session of the American Medical Association, at New Orleans, May 5 of this year, speaking of scientific medicine, said: "Much as has been accomplished by experimental medicine in a comparatively brief period of time, there are vast fields to which the method has not been applied. With most of us our present methods of clinical observa-

tions enable us to do little more than name the disease. In the vast majority of infectious diseases we are helpless to apply a scientific cure. Drugs, with the exception of quinine in malaria, and mercury in syphilis, are *valueless as cures.*" (Italics mine.)

Each year adds new evidence of the growing agnosticism of our friends in their own therapeutic principles. Each year brings its new explanation of some recognized fact. Each year shows some writer who appropriates as new a time-honored observation of ours. Each year brings to light admissions of bolder men to some of us that there is truth in our law. Not yet, however, have they been fearless enough to scientifically investigate the law of similia.

If there is any principle in the art or science of medicine which a medical body does not or will not scientifically investigate, any principle which they admit as sometimes true, yet to which they close their eyes or fail to give recognition, that body is sectarian in its attitude to science.

As truly as we are not sectarian when we live up to our principles, so truly are the dominant school sectarian when they as a school fail to investigate facts and a law founded on facts, of which they are cognizant.

It has been said that we shrink from a scientific investigation of the principles of homeopathy. On the contrary you know that we court such investigations, that it is by such investigations we have gained some of the most earnest and brilliant exemplars of our faith.

The pioneers of homeopathy were all allopathic physicians who had investigated, many of them prominent and honored members of the profession. A leading British medical society appointed a committee of five of its members to investigate and expose the humbug—homeopathy. Two of the number became homeopaths and the other three never reported. Constantine Hering, a prominent light in Berlin medical circles, was similarly appointed to investigate and controvert homeopathy, with the result that he became the father of homeopathy in the United States.

For years the challenge of one of our prominent writers has been standing unanswered, viz.: "No one who has written against the system (homeopathy) has been able to say, after mastering the subject in its details, put the theory to test, give it a fail trial, 'I find it of no use.'" If we court investigation we should *ourselves* be the first to investigate. If any of the hypotheses which were put forth to explain the truths of our law or of the facts observed after the application of remedies according to that law are at present untenable we should admit it even though the hypotheses in question was the master's.

Truth belongs to all ages, its luster never dims. Hypotheses are largely composed of the personal equation of the observer, based upon accepted data. Hahnemann was a foremost scholar of his age, recognized scientific authority; in promulgating a theory to explain his discovery he gave due weight to what science had demonstrated as true. Do you think that if Hahnemann had lived in this age of wonderful scientific discoveries, he would have failed to give them due

attention; that he would have ignored their teachings when interpreting his own observations? Would he have written the same Organon in 1903 that he did in 1810?

No fair minded investigator of our school can deny that some of the theories contained within the Organon are to-day obsolete, untenable, and disproved by scientific discoveries of which Hahnemann had no conception. It is no lack of loyalty to homeopathy or to Hahnemann to admit this; no lack of recognition of his scholarly attainments; no lack of admiration for his heroic struggle; no lack of appreciation of his genius to admit it.

It has seemed to me that since we use the Organon as a text-book in colleges, since we accept it as the repository of the truths of our law, and since we are to a great extent measured by our opponents in the light of the hypotheses as well as the facts it contains, it should be brought to conform to the advanced stage of science of to-day. Like the Bible, it requires an interpretation by students to obtain its full measure of acceptance and authority.

I know that this sounds to some of my brethren iconoclastic, yet please to do me the justice to notice that I refer not to the law of similia or to any other truth contained in the Organon, but only to such hypotheses as are commonly or universally accepted as untenable.

MEDICAL EDUCATION. It has been the proud claim of this Institute that we have always been foremost in the demands for a better medical education; that we have always been in advance of the legal requirements in the standard we have set for our medical colleges; that we have always anticipated the dominant school in the upward march for the better training of our students.

We adopted the compulsory three years' course for all of our colleges before the Association of American Medical Colleges required a three years' course. Similarly we adopted a compulsory four years' course before they did. Two years ago we demanded of our colleges that they should require the equivalent of a full high school course as a condition for matriculation; a condition which the American Medical Association is this year demanding.

While these things are to our credit we should remember that a few universities have set a pace which has exceeded us and are to-day making more rapid strides in the requirements for matriculation, and in the breadth of their opportunities for students than any of our colleges.

The standard of medical education is more uneven in the dominant school than with us; that they fall below us at one extreme is no reason why we should be willing that they should surpass us at the other.

That there is an explanation for this fact should not quiet our apprehension. The scientific training demanded to-day for the proper qualification of a medical student is broader than that demanded in any other pursuit or calling, professional or scientific. It has been demonstrated that, given a proper equipment, the expense of educating a medical student in accordance with the demands of the age in which we live, costs an institution about $400 a year for each student, part

of this expense we bodily saddle upon the teachers, the most of whom in our colleges work without compensation, a species of injustice to which we and our patrons have for far too long been indifferent. Accepting for the present, as we must, this condition, it still remains that the college must pay out for the education of its students at least twice what it collects from them in fees, if they fulfill the highest requirements. To continue to do this it must have productive endowments or State aid. Unfortunately, few of our colleges have any such endowments, and none have endowments adequate to the purpose. State appropriations, with few exceptions, have been very meager.

Outside of the few State universities which have homeopathic departments, only seven or eight of our colleges seem to be making any progress in their attempts to remedy this most unfortunate condition. The time has come when we must face this problem. If we expect to attract and to hold the best educated young men and women as our students we must give them opportunities as good as they can find elsewhere.

The college graduate who has had the foundation of a scientific training, will not be satisfied unless he can continue it. The attractions of progressive universities will and are to-day overbalancing his frail homeopathic faith. An examination of the lists of graduating classes from our colleges this year shows that proportionately there are fewer graduates of literary or scientific colleges than there were five years ago. This condition of affairs we cannot allow to continue.

College trustees, college faculties, this Institute, all men and women interested in homeopathy, must be made to realize that the education of physicians is a most important branch of educational work. We have been devoting our attentions and efforts of late very assiduously to the upbuilding of hospitals, with a truly remarkable result. Our hospitals are found in nearly every part of this country; they rank with the best. The public eye sees their need, philanthropists recognize their value. Take good care of them, use their opportunities to their fullest value, and they will continue to arise and to enlarge to meet all demands.

Within the last few years some very notable gifts and endowments have been made to medical colleges whereby their usefulness will be greatly enhanced. The example has been set, and we, like that famous college president of Chicago, should be busy "pointing out opportunities." We must also demonstrate our capability to make good use of funds entrusted to our care.

It has often been said upon the floor of this Institute that we have too many homeopathic colleges. The majority of you no doubt agree with me that this is true, but what are we doing about it? So long as the demand for homeopathic physicians is greater than the supply, there seems to be an argument for their continuance. But this argument is only apparently true. You only have to examine the facts within our own school to see that one well equipped, well conducted college will attract and hold more students than two or three not so equipped or conducted.

We should face the fact that medical education to-day is not a

money making enterprise, but rather an exacting duty, demanding the best qualified men, the best equipment, and the greatest financial resources of any branch of educational work. The college that was organized as a paying investment, that is conducted solely on a business basis, that has not resources outside of student's fees should not and cannot live long.

It is our duty to support our colleges by every means at our command, we should give our support with the same thought that a careful man makes an investment. Put it where there is an opportunity for a proper return; where it will help the cause of the school and where improved education is the dominant principle.

Be honest with ourselves and face the issues of to-day, prepare for those of to-morrow, those of yesterday are gone. Demand the best opportunities from our schools and help in attaining them.

Immediately following the completion of the address by President Cobb a reception was held in the parlors of the hotel, those in the receiving line being President and Mrs. Joseph P. Cobb, First Vice President and Mrs. H. F. Biggar, Second Vice President M. Belle Brown, General Secretary Charles Gatchell, Treasurer Thomas Franklin Smith, Recording Secretary and Mrs. J. Richey Horner, and those of the ex-Presidents who were in attendance at the meeting, among whom were Drs. O. S. Runnels, T. Y. Kinne, J. H. McClelland, Pemberton Dudley, J. B. Gregg Custis, Charles E. Walton, A. B. Norton and James C. Wood.

The remainder of the evening was devoted to dancing, which took place in the ball room, refreshments being served.

SECOND DAY

TUESDAY, JUNE 23, 1903

The Institute was called to order at 10 o'clock A. M., by President Cobb.

DR. GEORGE B. PECK, Chairman of the Board of Censors, reported in their behalf that the list of names of yesterday's applicants for membership had been posted for six hours, as required by the by-laws of the Institute, and there having been no objections filed, the Board of Censors recommended the election of these applicants to membership.

On motion of Dr. T. Y. Kinne, duly seconded, the recommendation was adopted and the applicants declared elected.

CHAIRMAN PECK then reported a list of thirty-six names of applicants for membership. Under the rules this list was ordered to take the usual course.

THE TREASURER, Dr. Thomas Franklin Smith, presented his report, as follows:

REPORT OF THE TREASURER.

New York, June 16th, 1903.

American Institute of Homœopathy, in account with Thomas Franklin Smith, Treas.

Receipts:		
By balance from old account, June 10th, 1902	$ 339.02	
By cash received from initiation fees and dues	7,499.00	
" " " " interest on deposits	33.02	$7,871.04
Disbursements:		
To cash paid Intercollegiate Committee	$ 10.00	
" " " Transportation Committee	24.30	
" " " Committee of Organization, Registration and Statistics	354.89	
" " " Mount Morris Safe Deposit Vault	60.00	
" " " Treasurer's Expenses to Cleveland meeting	94.59	
" " " Treasurer's Outfit	33.02	
" " " Bulletin Register	50.25	
" " " Printing	799.87	
" " " Printing Certificates	68.20	
" " " " " bal. old bill, 1902	.84	
" " " " Transactions	1,598.27	
" " " Expressing and Boxing Transactions	409.44	
" " " General Secretary, salary	1,000.00	
" " " " " postage and sundries	380.57	
" " " Recording Secretary, salary and expenses	568.47	
" " " Treasurer, postage and sundries	293.27	
Balance to new account	2,125.06	$7,871.04

Following the report the treasurer called attention to a special item of $33.02 in his account which he had incurred through a change in the method of keeping accounts. He has done away with the old

ledger method of keeping the accounts in large books, and has substituted the card system, which entailed the expenditure of the above amount.

The President referred the report of the Treasurer to an Auditing Committee consisting of Drs. J. H. McClelland, of Pittsburg; T. Y. Kinne, of Paterson, and C. J. Swan, of Chicago.

Dr. Edward Beecher Hooker, Chairman of the Committee on Memorial Services, presented the report of that committee. The report was accepted and referred to the Publication Committee.

Dr. Charles E. Sawyer, Chairman of the Transportation Committee, made the following report:

Report of Committee on Transportation.

Dr. Sawyer supplemented the written report of the Committee by the following verbal remarks:

"You will understand, of course, that the matters of transportation in this country are now under different traffic associations, that are located in different sections of the country, and these different traffic associations have certain demands that they make before according any special rate. To illustrate, in giving our estimates as to the possible number of members that would be in attendance from certain districts, we will take the Southern Traffic Association's territory. In that section we have about 275 members. Last year eight of these members were present. You can imagine the feeling that that association had when we came to propose that we had a contemplated membership of 275 from that section, and they confronted me with the report that they had but eight members here last year. And naturally they begin to feel that it is not very desirable to make special concessions to us, but finally, they granted it. I wish to say, however, in the matter of the Western Passenger Association, that they would not grant us a rate at all. I find that we have only about twenty-five members that belong to the Western Passenger Association's territory, and they attend only in small numbers ordinarily. Therefore it was impossible to get a grant from them, because these traffic associations demand that we shall have at least 100 from each of the different sections, so you can realize something of the difficulties that we had to contend with in the matter of getting transportation. Now, then, it seems to me it would be well for this body as the American Institute body to adopt some resolutions by which we can get better consideration from the different traffic associations of the country. In my correspondence with the Western Traffic Association, I have related to them the fact that we were contemplating going to the West, and while they have not been beneficiaries to any extent, in the future thy might be to a very great extent. But this personal appeal and appeal of my personal friends in Chicago went without avail, and consequently our Western members were not granted any special concessions. The territory of the Western Traffic Association takes in practically all west of the Rocky Mountains."

On motion of Dr. T. Y. Kinne, duly seconded, the report was received and referred to the Committee on Publication.

REPORT OF COMMITTEE ON PROPOSED CHANGE IN PUBLICATION OF THE TRANSACTIONS.

DR. CHARLES E. WALTON, Chairman of the Committee on Proposed Change in the Publication of the Transactions, made the following report:

"A brief history of this Committee will be in order.

"It was originally appointed to consider the feasibility of publishing the Transactions in journal form. At the meeting in Washington, 1900, the Chairman, Dr. Mohr, presented a report showing the advantage of publishing a Journal, and accompanied it with a resolution to that effect. The resolution was referred to the Committee on Constitution and By-laws, and has not been heard of since. The present Committee was appointed last year, but nothing beyond its name indicates the purpose of its creation. Presuming that a consideration of the Journal idea was associated with the appointment, we have included this subject in our report.

"Correspondence with Dr. D. M. Gibson, of St. Louis, the third member of the Committee, shows that he does not consider the publication of a Journal desirable. His letter is made part of the report.

"DR. HORACE PACKARD, the second member of the Committee, being abroad, and not available at the time this report was made up, has not been consulted.

"As I agree with Dr. Gibson in regard to the Journal, for reasons that can be mentioned if you see fit to bring the matter to a vote, you will please consider that a majority of the Committee is opposed to the publication of a Journal.

"In addition to the above subject it is assumed on the part of the Committee that it comes within its province to propose such changes in the publication of the Transactions as will secure their betterment and at the same time insure the most judicious expenditure of the money involved.

"The annual Transactions are intended to present a record of the organization, the business and proceedings of the Institute, together with such other matter as will evidence the status of homœopathy.

"It is this fourth item that furnishes a subject of controversy. The principal items of expense in connection with the Transactions are the expenses of the Committee on Organization, Registration and Statistics, and the cost of printing, which was, in round numbers, for 1901, $340.00 and $3,020.00, respectively. The delivery of the Transactions is a separate expense, and outside of our present consideration.

"The principal cost of the printing depends on composition and paper. As the amount of the latter depends upon the 'copy' furnished, our investigation leads us to inquire, How much needless copy is furnished?

"Our attention is necessarily directed to the work of the Committee on Organization, Registration and Statistics.

"We disclaim, at the outset, any captious criticism. In fact, we recognize the immense amount of labor bestowed by that Committee,

but we do call in question the practical result of that labor, and shall endeavor to show where a great saving can be made by a change of method.

"In regard to the matter relating to Medical Society statistics, it seems to me that the Institute is interested only in the name of the Society, time of organization, name of the Secretary, number of members, and names of delegates.

"We certainly do not care to know whether the Society is 'incorporated' or not; whether it 'prints its transactions' or not, whether its meetings are 'movable feasts' or not; how many members were added; how many died; how successful the last meeting was; where the next place of meeting will be; what are the annual dues, or what the last programme was.

"A careful pruning under this heading will cut down the space occupied to at least one-half, if not one-third.

"A distinction should be made between Homœopathic Hospitals and Private Sanitariums. Other means of advertising are open for the latter. At most, they should appear in the Transactions only by name and location.

"That a certain institution has had an epidemic of measles and whooping-cough; that another is filled with 'bottle babies' or syphilitics; that another one had to keep its inmates home from church on account of scarlatina is not information of such value as to justify its incorporation in the Transactions.

"A waste of composition and paper is involved in printing the street addresses of the members.

"A considerable number have the street address given four times. The 252 Seniors have theirs given three times.

"The 2,000 members have theirs given twice.

"Once is quite sufficient, and it should appear in the alphabetical register of members.

"By omitting the street addresses and displaying the names in the Classified List of Members in double column, twenty-four pages could be saved, and we would get rid of paying for that very expensive article of grease known as 'printer's fat.'

"By omitting the town and State address of the members in attendance, and displaying the names in double column, six more pages would be saved.

"By omitting the 'Graduates of Colleges,' a very unnecessary item of information, eight pages would be saved.

"By leaving out the Private Sanitariums and carefully editing the matter concerning the Journals, the Colleges, the Dispensaries, the Institutions under Homœopathic control, and the Societies, forty to fifty pages would be saved.

"This saving of space will be important when we come to consider the incorporation of the transactions of the Auxiliary Societies in those of the Institute. In this connection the following information is offered:

In 1900 Trans. of Gyn. and Surg. Soc. occupied.....300 pages
In 1901 Trans. of Gyn. and Surg. Soc. occupied.....185 pages
In 1902 Trans. of Gyn. and Surg. Soc. occupied.....166 pages
In 1900 Paper on Gyn. and Surg. in Institute occupied....166 pages
In 1901 Paper on Gyn. and Surg. in Institute occupied....130 pages
In 1902 Paper on Gyn. and Surg. in Institute occupied....122 pages

"It will be seen from this statement that the papers of the 'Surgical and Gynecological Society,' if incorporated in the Institute Transactions, will occupy but little more space than have been occupied by the papers of the 'Bureau of Surgery and Gynecology.'

"Your Committee commends the zeal of the General Secretary and Publication Committee in getting out so promptly the last volume of the Transactions, and their taste in having displayed the cut of the Hahnemann monument.

"In view of the foregoing we offer the following resolutions:

"RESOLVED, That the Publication Committee shall, until otherwise directed by the Institute, display prominently in the Transactions of each year the cut of the Hahnemann monument.

"RESOLVED, That the Publication Committee, and the Committee on Organization, Registration and Statistics, shall eliminate from the Transactions all superfluous matter and condense the list of names and addresses.

"At the meeting of 1900 Dr. T. F. Smith asked for instruction along the lines indicated in the report, but the Institute referred the matter back to him and gave him discretionary power to act. While the resolution just proposed practically does the same thing, it divides the responsibility between him and the Publication Committee, and will relieve him of embarrassment in instituting any changes he may decide to make.

"Respectfully submitted,

"CHARLES E. WALTON, *Chairman.*
"D. M. GIBSON."
"HORACE PACKARD."

On motion of Dr. T. Y. Kinne, duly seconded, the report was received.

On motion of Dr. T. Y. Kinne all that portion of the report with the exception of the resolutions, was adopted.

On motion of Dr. T. Y. Kinne, duly seconded, the resolutions offered by this committee were ordered taken up *seriatim* and acted upon by the Institute without reference to the Committee on Resolutions.

The first of the resolutions was called for, and was read by the Secretary, as follows:

"RESOLVED, That the Publication Committee shall, until otherwise directed by the Institute, display prominently in the Transactions each year a cut of the Hahnemann monument."

On motion of Dr. O. S. Runnels, duly seconded, this was adopted.

The Secretary then read the second resolution as follows:

"RESOLVED, That the Publication Committee and the Committee on Organization, Registration and Statistics shall eliminate from the Transactions all superfluous matter and condense the list of names and addresses."

DR. T. Y. KINNE moved the adoption of the resolution, which motion was duly seconded.

DR. O. S. RUNNELS: This resolution, I think, should be digested somewhat. That will include all matter coming up in the Sectional Societies, in which the Executive Committee and those societies may wish to have some voice, as it pertains to the publication of the matter from those Societies. It seems to me that there ought to be some concert of action between the Institute and the officers of those Societies, and I think that the Societies ,on their part, may desire to have a publication committee themselves that will pass upon matter that emanates from their societies. It might be well to have the chairman of their Publication Committee a member of the Institute's Publication Committee, so that the two would have vital contact. By so doing I think there can be a harmonious arrangement effected.

DR. T. FRANKLIN SMITH: I want to thank the Committee in one respect for what they have done, but still, at the same time, that word "superfluous" is a pretty large word, and it does seem to me, Mr. President and fellow members that the Institute itself should take a portion of the responsibility in regard to saying what should be published as the report of the Committee on Organization, Registration and Statistics. If this suggestion of the committee is adopted, it certainly would relieve the Committee of a very great deal of work. The reason that it has been so voluminous is that a large number of the members expressed a desire that they should know what work has been done by the different Societies and by the different institutions during the year. That information has been condensed as far as it was possible to condense it and leave any value in the report. Now, if the Institute desires that all such information should be eliminated from the report of the Committee, certainly the Committee are not going to find fault, because it is going to relieve us of a great deal of work. But I do think that the Institute itself should assume this responsibility and not leave it to the Committee on Publication and the Committee on Organization. I think the Committee on Publication would prefer also that the Institute should say what should go into that report.

DR. J. B. GREGG CUSTIS: Mr. President, I do not agree at all with the committee as to their estimate of the value of the work of the Bureau of Registration. To my mind, it makes the most important part of the whole Transactions. I admit that I, and I think in common with most others, read very few of the papers after the volume comes to our shelves, but there is hardly a week that I do not have to consult the report of the Bureau as to individuals, and as to institutions, and in its present form it is so convenient that a clerk can get any information you want in a very few minutes, and I hope it will not be changed from its present form, even if it is rather expensive. It will bear repetition and it is of great value.

DR. J. H. MCCLELLAND: I quite agree with Dr. Custis. If we make the changes suggested by the Chairman of the Committee, Dr. Walton, all of them, the thing to do would be to leave out the whole matter, because they have thoroughly taken out all that is of any value. I believe that there should be a revision, and that the matter should be as much as possible curtailed, and I believe that it is a question for very careful consideration by a Committee. I believe the Committee on Publication and the Committee on Registration should take up this matter and carefully go over it and report to this Institute at a later session. I therefore move that the subject contained in this resolution be referred to the Committee on Publication and the Committee on Registration. Those committees should jointly discuss the matter and report at this session of the Institute. I offer that as a substitute for the motion to adopt.

Motion seconded, and carried.

At this point in the proceedings the President read congratulatory telegrams from Drs. David H. Beckwith, of Cleveland, and Benjamin F. Bailey, of Lincoln.

On motion the Secretary was requested to send an appropriate response to each of these ex-Presidents.

The Chairman of the Local Committee made an announcement concerning the local entertainments.

In accordance with Article IX, Section 8 of the By-Laws, announcement was made of the nomination of officers of the Institute for the ensuing year. These names were as follows:

For President—Dr. John P. Sutherland, of Boston.

For First Vice-President—Dr. H. E. Beebe, of Sidney, Ohio.

For Second Vice-President—Dr. Annie W. Spencer, of Batavia, Ill.

For Secretary—Dr. Charles Gatchell, of Chicago.

For Secretary—Dr. Herbert D. Schenck, of Brooklyn, N. Y.

For Registrar—Dr. J. Richey, Horner, of Cleveland, Ohio.

The President appointed as a committee in charge of the election Drs. Frank R. Newton, of Somerville, Mass.; A. W. Baily, of Atlantic City, N. J., and Thomas E. Costain, of Chicago, Ill.

DR. CHARLES E. WALTON gave notice of the proposed amendment to the constitution, Article V., Section 2, reading: "No physician, graduate subsequent to the year 1891, shall be eligible to membership unless said graduation has followed three full annual courses of didactic and clinical lectures of not less than six months each." This should be changed, the word "three" being stricken out and the word "four" substituted.

The President accepted the notice and the proposed change took the usual course.

CHAIRMAN GEO. B. PECK, of the Board of Censors, reported a list of twelve names of applicants for membership. These took the usual course.

DR. THOMAS FRANKLIN SMITH gave notice that an official communication touching a question of ethics had been received, and moved that it be referred to the Senate of Seniors for action.

This motion was duly seconded, and it was so ordered.

The business of the morning having been completed, the President announced adjournment until nine o'clock the following morning.

THIRD DAY

WEDNESDAY, JUNE 24, 1903

The President called the Institute to order promptly at nine o'clock A. M.

DR. GEO. B. PECK, of the Board of Censors, reported that the forty-eight names read yesterday had been posted the required six hours and no objection had been made to any candidate.

On motion, the applicants were elected.

The Board of Censors recommended the election of the forty-eight applicants referred to.

On motion of Dr. T. Y. Kinne, duly seconded, the applicants were unanimously elected to membership.

Dr. Peck then reported a list of thirty-four additional names of applicants for membership. This list was ordered to take the usual course. He reported also that the total number of applications to the present time was 126.

Chairman J. P. Rand, of the Committee on President's Address, presented the following report on behalf of that Committee:

REPORT OF COMMITTEE ON PRESIDENT'S ADDRESS.

Members of the American Institute of Homeopathy: It gives us great pleasure to serve as a Committee to report upon the most able address which was delivered by our President at the opening of the present session. Brevity is the soul of wit, and we congratulate our President on the good sense displayed in not attempting to cover the whole past, present and future of medicine in a single address.

We almost regret that the address was so ideal in every particular, for we are thus denied the privilege of judicial criticism, which is often the most interesting part of an official report. The better alternative, however, is still ours, and we most heartily commend all that our worthy President has said.

He has shown in a most masterly way that Homœopathy is not dead, and that the school which represents it is still a public necessity. He has shown that the word "sectarian" as applied to the Homœopathic school is a misnomer, and that the "old-school," by persistently refusing to investigate the claims of *similia,* are really deserving of the title which they would apply to us.

He has shown that Hahnemann, though inspired with the great idea of Homœopathy, was not infallible, and that his writings, which are still a most valuable text-book in our schools, must be interpreted in the light of modern investigation in order to do him justice.

He has shown the catholic spirit of our school in common with the whole range of medical science, and proved by our own official declarations that we are not devoted to a *single idea,* as our opponents would have us believe. In short, he has shown that the truth of Homœopathy is not a sick child, to be coddled and jealously protected from exposure, but that it will stand, and even desires, the most critical investigation.

His suggestions in regard to medical education are of great value. Hospitals are needful, but medical education is indispensable. We need to have our medical colleges endowed. In fact, they must be endowed, if we are to continue to lead in the vanguard of progressive medicine.

Our President has wisely refrained from making the usual long list of specific recommendations. His address, however, is timely, suggestive and directly to the point. We commend it to the Publication Committee as worthy a place among the valuable contributions of retiring Presidents.

Signed, J. P. RAND,
W. A. DEWEY,
A. P. HANCHETT.

On motion of Dr. T. Y. Kinne, duly seconded, the report was accepted and referred to the Committee on Publication.

In the absence of the Necrologist, Dr. C. A. Weirick, of Chicago, Dr. Edward Beecher Hooker presented his report as Necrologist.

REPORT OF THE NECROLOGIST.

(For the report of the Necrologist, see Memorial Services.)

On motion the report of the Necrologist was received and referred to the Publication Committee.

PROPOSED AMENDMENTS TO THE BY-LAWS.

On motion of Dr. T. Y. Kinne, seconded by Dr. E. B. Hooker, Proposition No. 2, as presented to the members on the slip furnished them, was not agreed to.

This relates to a Nominating Committee, to be appointed by the President, from representatives of the various States.

On motion of Dr. Jas. C. Wood, seconded by Dr. Kinne, Proposition No. 3 was not agreed to.

This relates to a proposed amendment to the Constitution, making a change in the device on the Seal.

On motion of Dr. E. B. Hooker, duly seconded, Proposition No. 4 was not agreed to.

This relates to a proposed amendment to the By-Laws, creating the office of Assistant Secretary.

REPORT OF THE AUDITING COMMITTEE.

Dr. T. Y. Kinne, of the Auditing Committee: Mr. President, the Auditing Committee would report that they have examined the books of the Treasurer and find them absolutely correct. It was a mere matter of form and a work of supererogation to examine Treasurer Smith's books. It is with pleasure that we serve on such a committee when so perfect a set of books comes before us for auditing.

Dr. Geo. B. Peck moved that the report be accepted and concurred in. Motion seconded and carried.

PROPOSED REVISION OF CONSTITUTION AND BY-LAWS.

THE PRESIDENT: The subject of the proposed revision of the Constitution and By-laws, notice of amendments of which was given at the last session, will be taken up, and is before you. The amendments have been printed in the order in which they were presented to the meeting at the last session,

DR. T. Y. KINNE: I move that we take up No. 1, and I would ask that the Secretary please read it.

The Secretary read the proposed amendment, as follows:

Proposed, that Article IX., Section 8, of the By-laws be amended, making the ex-Presidents of the Institute a Nominating Committee.

DR. T. Y. KINNE: Now, Mr. President, will the Secretary please read Section 8 of this article, inserting the proposed amendment?

THE SECRETARY: In the fourth line of Section 8, where it now says "Nomination papers shall be furnished by the Secretary," etc., it would read "The ex-Presidents of the Institute shall be a Nominating Committee."

DR. J. B. GREGG CUSTIS: I move to amend by saying, "ex-Presidents present at a given meeting."

Motion seconded.

DR. EDWARD B. HOOKER: I desire to speak upon the amendment. It seems to me very proper indeed that these honorable gentlemen should be a nominating board. But in my opinion, gentlemen, the ex-Presidents who act in this capacity should not be simply the gentlemen present at any meeting; they should be the whole body of ex-Presidents, and they should make the nominations beforehand by correspondence among themselves and not simply the ex-Presidents who happen to be on hand at any given meeting. That is my idea, and I am therefore opposed to Dr. Custis' amendment.

DR. T. Y. KINNE: I think the consensus of opinion as to the general plan of working out this amendment was something after this: There are, I believe, now fifteen ex-Presidents of this Institute living. The idea was that, located as they are in different sections of the country in touch with the members of the Institute, knowing of their work, that they could individually select members who they believed would honor the Institute. Let that be done prior to the meeting of the Institute. Let it be done by correspondence, organizing your ex-Presidents into a nominating committee, with a chairman and a secretary. Then from these names which they have gained through correspondence select those that should be decided best by the ex-Presidents present at the session, putting in nomination for each office at least two candidates. This does not, of course, necessarily preclude an independent nomination, but if any member of the Institute should feel at the session that there was some other member to put in that place, prominent and efficient, that name could be reported to the Presidents in session during the Institute and by them taken into consideration, and they could present a concrete ballot for your vote, giving the right of choice, taking into consideration the different sections of the country, and the capabilities of the different candidates. That was the idea of the ex-Presidents with whom I have talked. That was the intention of the mover of the amendment.

DR. E. B. HOOKER: But, Dr. Kinne, that scheme is not formulated so as to give force to that idea.

DR. T. Y. KINNE: It is true. It would require, if that was adopted, that it should be put into working order; it would depend upon this Institute to determine how that thing should be done, if it was so adopted.

DR. E. B. HOOKER: It had better be left over to another meeting.

DR. J. B. G. CUSTIS: I want to state, in response to the gentleman from Connecticut, in advocacy of my amendment; Dr. Kinne has answered it in part. I am very diffident about speaking on the general proposition, having the honor to be one of the ex-Presidents. But in talking it over with some of our friends the idea was that the ears of the ex-Presidents be open during the whole year as to the qualifications of proposed candidates. But when in session as a nominating committee they would be under obligation similar to the lodge obligations which some of them have assumed, and it would be a free talk as to all matters, all qualifications, personal, professional and otherwise. They could there discuss questions that could not be put in writing, and would not be proper subjects for correspondence. They could hear objections to members that no one would like to put into black and white, if such things were possible. And there are always enough ex-Presidents present to make a good working committee. There are no men in the Institute who are more alive to its necessities, more anxious that the officers should be of the very best. But they can do better when in session, secret or executive, than they could by correspondence, and I think, inasmuch as the mails are always open and all other sources of information would be open, it would be better to confine the work to those on the ground.

DR. HERBERT D. SCHENCK: It seems to me this is too important a matter to take up until some Committee has carefully considered the wording of such an amendment and put it into proper shape so that it will be workable, and that cannot be done before the meeting at this time. I move that the matter be deferred, and referred to a committee to report tomorrow morning.

Motion seconded by Dr. Hooker.

THE PRESIDENT: It is moved to refer this matter to a special committee, and it is moved to amend by inserting that the committee shall prepare an amendment to the constitution in accordance with this proposition.

The motion was put and carried. The Chair appointed as the committee Drs. T. Y. Kinne, E. B. Hooker and H. D. Schenck.

AMENDMENT TO CODE OF ETHICS.

DR. RICHARD KINGSMAN: Under the head of new business I have an amendment to the code of ethics, to take the place of Sections 3 and 4. This comes to the Institute from the Washington Homœopathic Medical Society.

THE PRESIDENT: It will be referred to the Committee on Resolutions.

DR. CHARLES MCDOWELL offered the following resolution on the subject of child labor:

RESOLUTION ON CHILD LABOR.

Whereas, The employment of children interferes with their education, arrests their normal physical development, causes disease, frequently undermines their constitutions, and leads to premature age and early death; and is in consequence a menace to the public health, and to the prosperity of the working people. Therefore be it

Resolved, That we, the members of the American Institute of Homeopathy, in regular annual meeting assembled, hereby express it as our opinion that every state in the Union should protect its children by stringent laws prohibiting labor before the age of fourteen, and restricting labor between the ages of fourteen and sixteen; that the state laws should contain provision to prevent their evasion; and that the compulsory education laws should be made to strengthen and support the child labor laws.

Resolved, That it is the opinion of this body that in the near future the minimum age at which labor is permitted should be raised to fifteen years.

Resolved, That we urge all state and county medical societies to use their influence in favor of enlightened child labor legislation.

THE PRESIDENT: The resolution will be referred to the Committee on Resolutions.

REPORT OF BOARD OF CENSORS.

DR. GEO. B. PECK: The Board of Censors report the names of seventeen applicants for membership, and state that the total number is now 150.

THE PRESIDENT: These will take the usual course and be posted till the next session.

THE PRESIDENT then announced that the polls for the election of officers would be open from 10 to 12 o'clock this morning.

The meeting then adjourned until 9:00 a. m. Thursday morning.

FOURTH DAY

THURSDAY, JUNE 25, 1903

The fourth day's proceedings of the Institute were opened by the President, Dr. J. P. Cobb, at 9 o'clock a. m.

DR. GEO. B. PECK, from the Board of Censors, made the following report: The names read yesterday morning have been duly posted. No objection has been filed as to any of the candidates, and the Board of Censors recommend their election.

DR. O. S. RUNNELS moved that the candidates be elected in accordance with the recommendation. Motion seconded and carried, and the candidates declared elected.

DR. GEO. B. PECK: Application has been received for corresponding membership in this Institute from Dr. Magalhaes Castro, San Paulo, Brazil. His papers have been carefully examined by all the members of the Board, and he has proper papers from his own country and from New York physicians, and the Board unanimously recommend his election to corresponding membership.

DR. O. S. RUNNELS moved that the applicant be elected in accordance with the recommendation of the Board of Censors. Motion seconded and carried, and the applicant declared elected.

DR. PECK: The Board of Censors present the following applications for membership, seventeen in number.

THE PRESIDENT: The list of names will be posted and referred to the Board of Censors.

REPORT OF THE INTERNATIONAL BUREAU OF HOMEOPATHY.

DR. GEO. PECK, on behalf of the International Bureau of Homœopathy, then read the following report:

During the autumn of 1902 a letter was addressed to a physician residing in each of the following countries: Austria-Hungary, Belgium, Denmark, France, Germany, Great Britain and its dependencies (Australia, Barbados, Cape Colony, India, New Zealand and Tasmania), Holland, Italy, Portugal, Russia, Spain, Sweden, Switzerland, Mexico, Argentina, Brazil, Uruguay, Venezuela, and possibly in others. Inquiry was made concerning the existence of laws prejudicial to homœopathy, and also to medicine (as the term is understood by the allopathic school), coupled with a request for the citation of unfavorable statutes. Replies were received only from Austria-Hungary, Denmark, England, France, Italy, Russia, Switzerland and Tasmania. They are given in abstract.

In Denmark Homœopathists had the right to dispense their own medicines until 1886; since then they have been obliged to write prescriptions. Into its medical society they are not received, though they have passed an examination at the university as general practitioners, But when an allopath becomes needy or bankrupt money is solicited from them at once, and they are addressed as "Dear Colleague." When

a sick club employs a homœopathist, the old-school physicians resign their positions. The State gives nothing to homœopathic hospitals. "Denmark in this respect is not a land of freedom."

In England the new school has equal rights with the old. It suffers not from the written law, but from the *unwritten*. "The Royal College of Physicians acts as a kind of trades union." It does not allow its members and fellows to meet homœopathists in consultation. "We are strangled by vested interests." All medical chairs are kept in allopathic hands by election.

In France the obstacle to the growth of the new school is the extreme centralization of public teaching. As all lectures are allopaths, no homœopath can hope to be received as one. Should a lecturer become a homœopathist it would not help the cause, as other lecturers would refuse to graduate his pupils. With our private medical college at Lille, the Minister of Public Instruction does not interfere, as the students are examined by a mixed board, one-half of which, with its president, are state lecturers. The practice of all physicians is becoming more and more like homœopathy, but the discoveries are attributed to Professors B and X, instead of to Hahnemann.

In Hungary there are no laws that hinder homœopathy in its scientific development. Practicing physicians are obliged to write prescriptions.

In Italy doctors duly qualified may follow any therapeutic system preferred. Homœopathists may dispense medicine gratis in places where their special pharmacies are not found.

In India there is no law for or against homœopathists as regards the right to practice, but the government has no sympathy with them; even their sick certificates are refused recognition in courts, though the certifying homœopathist be a graduate of a government-recognized medical institution.

In Russia *legally* no preference is shown either school, though homœopathists labor under enormous disadvantages, all government medical posts being occupied exclusively by allopathists. "But according to a statute of the Committee of Ministers confirmed by His Imperial Majesty, the Emperor, on the 28th day of January, 1899, the right of Crown service is granted to physicians and other officials serving the hospitals and dispensaries of the Charitable Society of the Followers of Hahnemann. This right was procured through the Minister of the Interior."

In Switzerland there are no laws against homœopathy and none for it. Physicians must be Old School doctors, and then they are free to practice as they like. Strictly speaking, homœopathists have no right to dispense their remedies, but they do, and as yet there has been no opposition.

In Tasmania there is no state legislation that interferes with the practice of homœopathy. Foreign diplomas are on the same footing as those furnished by the Royal College of Surgeons of England. Ordinary practitioners, however, will not meet homœopathists in consultation nor give them any assistance whatever, yet homœopathy enjoys the confidence of the public. Both doctors and pharmacists are well

patronized. They have a hospital of their own in the south and in the north, a strong association, and until recently have issued a monthly journal which was discontinued only when it may have been said to have served its purpose.

From these communications certain conclusions may legitimately be drawn.

First: Greater toleration *may* be found (in certain directions at least), under an absolute monarch than within constitutional monarchies, or even in republics.

Second: The dominant, or allopathic, school has refrained from attempting prohibitory legislation against the New School mainly through fear of the people.

Third: The allopathic profession has tacitly adopted at least one of the cardinal principles of the trades union, ostracism of outsiders.

Fourth: The vaunted humanitarianism of the allopathic school is mere pretense, since it remorsely permits anyone to die (in case of surgical or obstetric emergency), unless its claim to be the sole possessor of adequate knowledge and skill is recognized.

Fifth: As the allopathic school is the only source of medical truth, all things are error that bear not the stamp of its approval.

Sixth: The chief aims of the allopathic profession are to retain all public honors and emoluments now possessed, and incidentally to maintain a reputation for scientific progress.

Permit me here to direct attention to another class of facts. At or about the dawn of the twentieth century there were in the United States (exclusive of Alaska and other dependencies), 9,369 homœopathic practitioners, or one in 8,000 of its population; in Barbados 5 or one in 38,000; in British America (including Newfoundland and all Labrador), 87 or one in 64,000; in Uruguay, 7 or one in 133,000; in Switzerland, 22 or one in 151,000; in Australia, 29 or one in 155,000; in Spain, 118 or one in 163,000; in Belgium, 41 or one in 164,000; in France, 211 or one in 192,000; in Germany, 290 or one in 194,000; in Great Britain and Ireland, 201 or one in 203,000; in Holland, 17 or one in 300,000; in Denmark, 8 or one in 306,000; in Mexico, 32 or one in 423,000; in Brazil, 33 or one in 428,000; in Italy, 42 or one in 772,000; in Argentinia, 6 or one in 809,000; in European Russia, 66 or one in 1,608,000; in Portugal, 3 or one in 1,674,000. There were also 41 in India, 2 in China, 1 each in Cape Colony, Sweden and Venezuela, as well as 3 in the Hawaiian Islands and 1 in Alaska.

While there are reasons for a belief that quite a number of other homœopathists are to be found, not only in the countries named, but elsewhere, we must rest upon the face of the returns. This indicates there are not less than 10,635 disciples of Hahnemann in the world, of whom 88.1 per cent reside within the limits of the United States proper. At least one-fifth of these practitioners are members of the American Institute of Homœopathy. These figures provide ample material for protracted and serious thought. The antagonism of illiteracy to homœopathy presses upon the attention. A striking illustration thereof if found just over the line in Canada, where the ratio of New School men to other physicians in the Province of Ontario is more than double that in the Province of Quebec.

Note: To the *Cleveland Medical and Surgical Reporter* for June, 1903, we are indebted for the names of two Japanese lady practitioners of our school, and for the information that no prejudice there exists against us.

Two practical lessons are apparent:

First: Homœopathists stand not merely as defenders of the science of therapeutics, but as champions of liberty in scientific thought and action.

Second: As the American Institute of Homœopathy is the largest and most powerful medical organization that declines to recognize superior authority, it is *the* bulwark of protection from oppression by one of the most formidable and most iniquitous trades unions ever organized.

Respectfully submitted,

GEO. B. PECK, Chairman.

DR. T. Y. KINNE: I move the acceptance of the report, with thanks for the incomparable statistics we have had given us.

THE PRESIDENT: It is moved and seconded that this report be accepted, with a vote of thanks. Motion carried.

PLACE OF NEXT MEETING.

THE PRESIDENT: It is now 9:30, and the special order of business for this hour this morning is the selection of the place of meeting for 1904. I will ask the Secretary to read the list of places that have been put in competition, or the places from which we have received invitations, with the information that the committee has been able to obtain.

The Secretary read a list of the places from which invitations had been received.

DR. J. B. G. CUSTIS: Does the Executive Committee give any recommendations?

THE PRESIDENT: The Executive Committee does not. They do not understand that their instructions are to do anything but report all the facts.

DR. O. S. RUNNELS: Having made that resolution myself, it was distinctly in my mind, and I think in the minds of the Institute, that the Executive Committee were to bring in a recommendation as to the place.

THE PRESIDENT: It is not so stated in the by-laws.

DR. RUNNELS: Well, that was the fact, and I should like to have it that way. We would know something about it then. We have thought about it a long time.

DR. A. B. NORTON: Couldn't this matter be postponed and referred to the committee to digest this and recommend three places for selection tomorrow morning?

DR. J. W. LESEUR: It seems to me the motion is untimely, inasmuch as the Institute has been advised by circular that this matter would come up at this hour.

DR. O. S. RUNNELS: It is very important that this matter be settled now while the members are here, and I move that a special committee be granted half an hour in which to bring in recommendations on this subject, and that 10 o'clock be fixed as the hour for the special order, and I move that the Secretary be made Chairman of this Special Committee.

The motion was put and carried. The President appointed as the Special Committee, of which the Secretary was chairman, the following two other members—E. B. Hooker and W. S. Briggs.

REPORT OF COMMITTEE ON MEDICAL EXAMINING BOARDS AND MEDICAL LEGISLATION.

DR. H. H. BAXTER: *Mr. President and Gentlemen:* Your Committee have received from Dr. Higbee a paper on the present needs of medical legislation, dealing with the question of indiscriminate sale of proprietary medicines and what is known as over-the-counter prescribing by druggists and their clerks. The paper was received so late that the committee have not had an opportunity to give the subject proper consideration, and it is therefore presented to the Institute by title, with the recommendation that the matter be referred to the next succeeding committee on this subject.

The report was read by Dr. Baxter as follows:

The subject which has received most general discussion among the members of State Licensing Boards in the last few years, and one which greatly concerns the general profession, is that of reciprocity, or the interchange of licenses between States. Many of the State laws contain a clause permitting the Examining Board to accept a license issued by the Board of another State, provided the Board issuing such license will accept, in like manner, a license issued by the first. Until recently the desirability of such an arrangement has not been questioned.

The American Association of Medical Licensing Boards, which meets in connection with the American Medical Association, has had this subject under discussion at various times, but without any practical result. The details of the recent session of this body at New Orleans have not come to hand, so that any extended criticism or comment is not justifiable. It is known, however, that a decided hostility to reciprocity in any form was manifested, and chiefly by delegates from the Eastern States. The reason for this opposition and the line of argument used in support of it is not clear. The fact of such opposition is significant.

Members of some State Boards in the West, not satisfied with the progress, or lack of progress, of the American Association, have recently organized an association, "The American Confederation of Reciprocating Examining and Licensing Boards." At a recent meeting held in Chicago, representatives were present from seven States, viz.—Indiana, Michigan, Ohio, Iowa, Missouri, Kansas and Wisconsin. Letters of approval were read from a number of other State Boards who could not send delegates. The following was adopted as a basis for the interchange of licenses:

(*a*) That as a pre-requisite to reciprocal registration the applicant therefor shall file in the office of the Board of the State of which he is a licentiate such evidence as will enable the said Board to certify that he is of good moral and professional character.

Such certificate shall be filed with his application for reciprocal registration in another State.

Qualification No. 1.

(*b*) That a certificate of registration showing that an examination has been made by the proper Board of any State, on which an average grade of not less than 75 per cent was awarded, the holder thereof having been at the time of said examination the legal possessor of a diploma from a Medical College in good standing in the State where reciprocal registration is sought, may be accepted, in lieu of examination, as evidence of qualification. Provided, that in case the scope of the said examination was less than that prescribed by the State in which registration is sought, the applicant may be required to submit to a supplemental examination by the Board thereof in such subjects as have not been covered.

Qualification No. 2.

(c) That a certificate of registration, or license issued by the proper Board of any State, may be accepted as evidence of qualification for reciprocal registration in any other State; provided, that the holder thereof was, at the time of such registation, the legal possessor of a diploma issued by a Medical College in good standing in the State in which reciprocal registration is sought, and that the date thereof was prior to the legal requirement of the examination test in such State.

In some States a legal obstacle in the way of the adoption of this resolution was found to exist, which could only be removed by legislative enactment. It is in practical operation between several of the States.

Your committee recommend that these qualifications be approved as a basis for uniformity.

The subject of uniformity in time and work in the college course is receiving attention, and probably will be one of the principal subjects of consideration by the different State Boards during the coming year. In Ohio, a conference of the colleges with the State Board of Examiners has been called to consider the subject. Whatever advantages may be secured by such uniformity, care should be taken that it be not carried so far, or regulations concerning it are not made so rigid, as to destroy the individuality of the college, or to prevent development in any direction any college may think desirable.

The relation which the State Licensing Boards bear to the extension of Homœopathy is a subject which has received too little consideration by members of our school. That such a relationship exists, will not be denied by any who will give it even a cursory examination. We should not lose sight of the fact that the scheme of Medical legislation, which later developed into the present Examining and Licensing Board system, originated with the so-called dominant, or allopathic school. The original purpose was threefold—

(a) To raise the average of scholastic attainment of medical men, and to make the medical professioan, in fact as well as in name, one of the learned professions.

(b) To decrease the ratio of physicians to the number of inhabitants in the country.

(c) The extinction of the minority schools of medicine, especially the homœopathic.

The homœopathic physicians were in full accord with those of the other schools in the accomplishment of the purpose first mentioned. In fact, this Institute took the lead in being the first to demand a higher grade of scholarship of the students entering and graduating from our medical colleges. Much is being accomplished in this direction by the different State Boards, each working in its own way. This subject, therefore, may be dismissed without discussion, as one upon which all are agreed.

The second proposition is different, viz., decreasing the number of physicians.

Here we find the interests of the homœopathic and the allopathic schools are directly opposed. The old school practitioners are numbered by the tens of thousands, and the yearly increase is by thousands. In every village and cross-roads hamlet, with a medical business enough barely to support one or two, we find the field occupied by a representative of their school. The towns and cities are full to overflowing. The Army and Navy furnish places for many, but the supply exceeds the demand, so that, notwithstanding the support afforded by all the appointments under the National Government, and the State and municipal patronage which they practically control, they have more than they know what to do with—more than can earn, legitimately, a proper support in medicine. Dr. Billings, president of the American Medical Association, in his address at New Orleans, was very outspoken on this point. He asserted that one-fourth of the present number of yearly graduates would be ample to supply the demand. In order to accomplish the end thus desired, Dr. Billings advises that the number of colleges be reduced.

In the homœopathic school we find the conditions reversed. Instead of fewer practitioners, we want more. The only way in which we can hope to extend homœopathy and to strengthen it with the people is to increase the number of its practitioners. Probably there are few communities in which there are not some who know something of homœopathy, an dthe benefits to be derived from its system of treatment; but there are many communities which have never enjoyed the presence of one of our practitioners. Most of the cities, towns and many of the larger villages, are sufficiently supplied with homœopathic physicians; but there are towns of considerable size, and even cities, without a representative of our school. We want men—more men—and still more men, especially for the villages and hamlets throughout the country. Where and how shall we get them?

The old-school are using every effort to secure representative legislation and board regulations, and they are succeeding. Such legislation and regulations, however, must, necessarily be general in character, and apply with equal force to all institutions, homœopathic as well as allopathic. It becomes apparent that such legislation, in one sense at least, is detrimental to the interests of homœopathy. To meet and overcome this condition is a problem which merits the consideration of this Institute.

As a partial solution of it, we would suggest that homœopathic physicians be urged, each to constitute himself a recruiting officer.

to enlist good men to fill the vacant places that still exist in our ranks. Let him talk to the parents who are uncertain as to an occupation for their children, and point out to them the demand for homœopathic physicians. Begin with the boy as he enters the high school, the academy or college, and urge that his course of study be so directed that it will be of material use to him in the study of medicine later. Let him see to it later, see to it that the student enters a homœopathic college, and receives his medical instruction from homœopathic teachers.

THE COMMITTEE, *by* H. H. BAXTER, Chairman.

DR. E. B. HOOKER: I move that this report be accepted and referred to the Committee on Publication.

Motion seconded and carried.

DR. H. H. BAXTER: I understand that the motion made was to accept the report and refer to the Publication Committee. I beg to call attention to the fact that the report involves a recommendation as to which it will be necessary to use the word "adopt" in regard to those qualifications of reciprocal applicants.

DR. J. H. MCCLELLAND: I move the adoption of the recommendation contained in the report, and that a copy of these recommendations be sent to the Secretary of each State Examining Board, requesting a reply giving their opinion as to its feasibility.

The motion to adopt the recommendation, with the amendment proposed, put and carried.

REPORT OF COMMITTEE ON DRUG PROVING.

The Committee on Drug Proving made the following report:

Your Committee on Drug Proving begs leave to report that during the past year no drug pathogenetic work has been done by the committee, because of the fact that the drug experimentation being conducted under the auspices of the Ophthalmological, Otological and Laryngological Society, included the services of all persons in this country at present available for drug proving.

We further wish to report that we believe this work of the O., O. and L. Society to have been conducted upon thorough, conservative and effective lines, and can suggest no better method of proving drugs.

Although the experimentation above noted is effective, we still regard it as somewhat experimental, and until a full report of the results of the work has been submitted for examination it will be impossible to adopt an intelligent and final conclusion as to its real value.

We, therefore, recommend that the American Institute of Homœopathy authorize and instruct this Committee to solicit and carefully consider the opinions of a large number of the members of this Institute who are interested in the work of drug pathogenesy, and at the next annual meeting of this body report the results of its consideration, together with a definitely formulated plan for future work in the field of drug pathogenesy. Respectfully submitted,

ELDRIDGE C. PRICE, *Chairman.*
CHAS. MOHR,
E. B. NASH.

PLACE OF NEXT MEETING.

THE PRESIDENT: It is now 10 o'clock, which is the limit of time given to the committee to report recommendations, and we will call for the special committee to report, Dr. Gatchell, Chairman.

DR. CH. GATCHELL: Mr. President, the only places in the list which fulfill all the conditions of the invitation, having come from a responsible organized body, either of physicians or of the business men of the place, and in which the hotel accommodations and all the details contained in the questions asked would make it favorable as a place for the next Institute meeting, are three. Those are Saratoga Springs, N. Y.; Niagara Falls, N. Y., and the Auditorium Hotel, of Chicago, and the committee has brought back a report presenting these three places to the Institute for its action and choice.

On motion of Dr. Royal, duly seconded, it was ordered that a rising vote be taken in the selection of the place of meeting. The President then put the question to vote. The result was: Chicago 19, Saratoga Springs 43, Niagara Falls 43. A second vote was then taken, resulting as follows: Niagara Falls 62, Saratoga Springs 58. The President then declared Niagara Falls selected as the place for the next meeting of the Institute.

On motion of DR. T. Y. KINNE, duly seconded, the Executive Committee was instructed to make definite arrangements with the hotel proprietors in writing.

The Secretary then read the report of the Committee on Conduct of Elections, as follows:

Whole number of votes cast, 237. Of these, for President. Dr. John P. Sutherland, received 236. For First Vice-President, Dr. H. E. Beebe, received 236. For Second Vice-President, Dr. Annie Whitney Spencer received 237. For Secretary, Dr. Chas. Gatchell received 150; for Secretary, Dr. Herbert D. Schenck received 87. For Treasurer, Dr. T. Franklin Smith received 236. For Registrar, Dr. J. Richey Horner received 236. For Censor, Dr. W. E. Riley received 188. FRANK L. NEWTON, *Chairman.*

THE PRESIDENT: I hereby declare that John P. Sutherland, having received the total number of votes cast for President, has been unanimously elected President of this Institute for the succeeding year.

The announcement was received with applause, and Dr. Sutherland was called for and responded as follows:

DR. JNO. P. SUTHERLAND: *Members of the Institute,* I cannot begin to express to you how proud I am and how happy I am for the honor you have conferred upon me. Could I, I would express my gratitude, but it is entirely beyond me. I feel the honor most highly, and I want to thank you most heartily for the great courtesy which I think you have shown Boston in electing me President. It is Boston; I do not take it as a personal thing; I really think it is an expression of your regard for my colleagues here in Boston; I take it that way. Now one little request I want to make. I hope the meeting here this week is going to prove satisfactory to all of you. But we want to look a little bit to the future. If anything has conspired to make the

meeting a success, it has been the absolute unanimity of the committee having the matter in charge. I want to say what I said once before, that I have never had so pleasant a time with my colleagues, and I think they will say the same thing. I do not think we ever had so absolutely pleasant a time as we have had during the past six months in getting ready for your welcome. If we want to have successful meetings in the future, the success can be brought about through co-operation, the same sort of co-operation that has existed here in Massachusetts during the past six months. I have great confidence in it. No one present is responsible for what success the meeting may have. It is the entire Committee, and now, and before you, I want to thank every member of that Committee for the noble work that has been done. It has been done most willingly, and, I hope, successfully. There has been, as I say, wonderful co-operation, and if you will sink all sorts of personal ideas and simply unite to carry on the work of the Institute, I am sure we are going to have a better meeting next year than we have had this year, or any other year.

But that cannot be brought about through the effort of any one individual, or through the effort of any one Committee. It must be done by the unanimous co-operation of the entire Institute. I hope that will be the result.

THE PRESIDENT: I hereby declare that Dr. H. E. Beebe, having received all the votes cast for first Vice-President, is unanimously elected as First Vice-President of the Institute for the succeeding year.

In response to calls, Dr. Beebe said:

DR. H. E. BEEBE: *Mr. President:* I will say that I will do all in my power to aid any work connected with the Executive Committee to make the next meeting of the Institute as grand a success as this has been.

THE PRESIDENT: Dr. Anna Whitney Spencer, of Batavia, Ill., having received all the votes cast for Second Vice-President, is hereby declared unanimously elected as Second Vice-President. I hereby declare that Charles Gatchell, of Chicago, having received a majority of the votes cast for Secretary, is elected Secretary for the succeeding year.

In response to calls, Dr. Gatchell said:

DR. CH. GATCHELL: I take it as a compliment that my election indicates that I occupy the only office that is worth having, since it is the only one that was paid the compliment of a contest. I thank you.

THE PRESIDENT: Dr. T. Franklin Smith, having received all the votes cast for Treasurer, I hereby declare him unanimously elected Treasurer of this Institute for the succeeding year.

THE PRESIDENT: Dr. J. Richey Horner, having received all the votes for Registrar, I hereby declare him unanimously elected as Registrar for the succeeding year.

DR. J. R. HORNER: I am happy indeed to be chosen to serve as your Registrar.

THE PRESIDENT: Dr. W. E. Riley, of Portland, Mo., is also unanimously elected a member of the Board of Censors for the succeeding five years.

DR. T. Y. KINNE: *Mr. President,* your Committee appointed yesterday morning to formulate a plan whereby the proposed amendment to the by-laws could be carried out, will report the following: I presume you each have a copy of the by-laws as they are. On page 7, beginning with the third line of Section 8, strike out the seven lines following until you come to the words "no nomination;" insert in place this: "Nominations shall be made by the ex-Presidents of the Institute, who shall constitute a Nominating Committee. They shall organize by the election of a chairman and a secretary at each session of the Institute, who shall assume office at the close of the session at which they were elected. The members of this Committtee shall file with the Secretary before the opening of each session of the Institute, a list of nominations for each elective office. From the list the members of the Committee present at the session shall, at 10 o'clock on the first morning, present at least one name for each office. Any member of the Institute receiving the endorsement of ten members shall be considered a nominee, provided such nomination is filed with the Secretary of the Institute before 12 o'clock of the first morning of the Institute. All the nominees of the Nominating Committee shall have a star placed opposite their names on the official ballot." That is the report of your Commitee, sir.

DR. T. H. CARMICHAEL: I move that the amendment, or report, be laid upon the table.

Motion seconded.

THE PRESIDENT: It is moved and seconded that the report of the Committee be laid on the table. This is not debatable, and all those in favor will please signify it by saying aye.

DR. A. B. NORTON: I make a point of order. I offered a motion to adopt this before the gentleman made his motion.

THE PRESIDENT: I regret that I did not hear that motion.

DR. A. B. NORTON: The motion was made and seconded.

THE PRESIDENT: The motion before the house is to lay the report of the Committee on the table.

The Ayes and Noes were called for, and the motion declared lost.

DR. A. B. NORTON: I again make my motion that the report of the Committee be adopted. Motion seconded.

DR. J. W. LE SEUR: *Mr. President,* I desire to speak to the motion. I agree with the Committee, and with a large number of the members of this Institute, that the method of nomination hitherto in vogue is in many respects very undesirable. While I believe that we ought, as a deliberate body, to have some method which shall recognize the right of every member to participate in all the deliberations and actions of this body, I am not impressed with the desirability of this amendment in all its features. I concede readily that it has many features most desirable, but I recognize the fact that this amendment touches the rights of every member of this body. No matter how long he may have had the honor of membership, no matter how recently he may have come into this honorable body, he has certain rights that belong to him as a member, not of the Institute of Homœopathy, but the *American*

Institute of Homœopathy, and I believe that before we pass upon a matter so important as this, every member of this Institute should have a printed notice specifying the changes which are to be made. There is no necessity for haste in a matter affecting vitally all our fundamental rights as members. We have lived for a long time, and the Institute has steadily grown and increased with the years, until today she is too strong to take the slightest liberty with the last small right of the weakest member of this great body. (Applause.) So that I believe we should do no one an injustice, and I would be the last one to disparage the report of the Committee. I gladly concede the fact that the Seniors of this body are men of whom we have every right to be proud, and the presidents of this organization have been men who have led Homœopathy through the devious ways up to the dizzy heights of eminence and renown. (Applause.)

A MEMBER: You must be an ex-President.

DR. LESEUR: While that may have an element of humor in it, it has a good, strong element of truth in it, and I challenge you, I challenge the membership in its entirety, to gainsay that statement. I reiterate, the men who have been Presidents of this American Institute of Homœopathy have been men of whom the Nation is proud, and we have a right, gentlemen, members, friends, in considering a matter as important as this, to take time sufficient to be sure that no one shall say in the days that are coming that in the city of Boston, where rights have been fought for, and where rights ought, if anywhere in the broad universe, to be held sacred, that no one shall say in the coming days that the right of any member was in any sense violated by any action that we may take. It will not do any harm to put this over for a year.

DR. T. H. CARMICHAEL: If there were any good reasons for a change of this kind at this time, I should be the last one to oppose it, but the American Institute of Homœopathy, unlike the American Medical Association is not a delegate body; it is a thoroughly democratic body, and has always stood for the individual practitioner, and while, with Dr. LeSeur, I have every confidence and admiration for the skill of our ex-Presidents, at the same time the nearer we keep to a strictly democratic method of conducting our business and nominating our officers the better for the Institute, as it is at present constituted. I hope, therefore, without any disrespect to our ex-Presidents, that this motion will not prevail, and that the old method will still be pursued.

DR. J. H. MCCLELLAND: I wish to say briefly that while this plan may not be a perfect one, I think we will all agree that it is far and away better than the present method. Speaking of the rights of members of the Institute, I am sure the present method shuts off all sort of discussion, and that hardly one member in ten knows whom he is going to vote for, or has had any work in the selection of a member he is about to vote for. Now, I say, let us improve that method. We are endeavoring to respect every right of the membership, and if there is any one who has anything better to offer, we would be very glad to hear it.

DR. E. B. HOOKER: *Mr. President,* I beg the members of the Institute will not be led astray by the eloquent periods of the gentleman who opposes this proposition, whose words flow in a stream rivaled only by the torrents which flow by the place which he has advocated for our next meeting. There is a practical question before us, as Dr. McClelland says, that of arriving at the best method of nominations. This is a democratic body, and by this amendment no right is taken from us. The ex-Presidents make nominations. The members of the Institute have the same right to make nominations that they now have, for it is expressly provided in that amendment that any member receiving ten endorsements shall be a nominee. The only force that this amendment will have will be that the ex-Presidents will recommend certain candidates, and they will simply have the influence of those gentlemen's names behind them. There is no starchamber. It is simply the influence of the gentlemen who have nominated them. Those nominations must be in by 10 o'clock on Tuesday, the first morning. If those nominations are not satisfactory, the members of the Institute have the same right which they now possess of nominating anybody else, and those nominations do not close till 12 o'clock, giving them two hours in which to make new nominations if they choose, and from what we know of the activity of the members of this Institute, two hours will constitute ample time in which to put in a new ticket.

DR. T. Y. KINNE: I move that the further discussion of this matter be postponed until tomorrow morning.

The motion to postpone was seconded, put and carried.

The Institute then adjourned until 9 a. m. Friday.

FIFTH DAY

FRIDAY, JUNE 26, 1903.

THE PRESIDENT called the meeting to order at 9 o'clock a. m.

DR. GEO. B. PECK, for the Board of Censors, reported eight applications for membership, which were ordered to take the usual course.

REPORT OF THE INTERCOLLEGIATE COMMITTEE.

DR. H. M. DEARBORN, from the Intercollegiate Committee, reported the following resolution, with a recommendation that it be adopted:

Resolved, That the Intercollegiate Committee of the American Institute of Homœopathy recommends to the Colleges represented in the Institute the addition to their curriculum of special instruction in life insurance examinations, and that the Colleges be so notified.

On motion, duly seconded, the resolution was adopted.

REPORT OF THE INTERSTATE COMMITTEE.

DR. J. B. G. CUSTIS, of the Interstate Committee: First, I want to report that the Interstate Committee had three meetings, and shows a desire on the part of the representatives of the several States that the Committee get into active work. The Committee organized by electing Dr. A. W. Baily, of Atlantic City, Secretary, and the present speaker President. They respectfully ask that the Institute authorize the Secretary of the Committee to send out special notices to the several State Societies asking for the appointment of delegates who shall come duly accredited and bring with them reports of the status of Homœopathy in the States, and make such recommendations as they see fit. They further ask that the Secretary of this Institute be directed to mention, in his announcement, the time and place of their meeting and the method of election of the accredited members to the Interstate Committee, or any other announcement that might be given from the chairman or secretary of that committee.

By direction of the Committee I give notice of the following amendments to article fifth, section first, of the By-Laws:

Insert after the word diploma in the sixth line the following: "and in what medical societies he holds membership, and no one shall be eligible for membership in the Institute who is not a member of the State society of the State in which he resides, provided such a society exists. Certificates of membership in such State society shall be accepted in lieu of the initiation fee of two dollars hereinafter provided for."

The Committee held several interesting and well attended meetings, and adopted the following report prepared by a sub-committee on organization:

"That the object of the Inter-State Committee is—*First.* The encouragement of the organization of homœopathic county and State societies, to which are accorded the privilege of sending delegates to the American Institute of Homœopathy who may report on the state of the School in their respective States, as to personnel, its needs, as

to its hospitals and educational facilities, its status in examining and health boards, and as to such other facts as they deem important.

"*Second.* That inasmuch as the Inter-State Committee is a delegated body it could and should undoubtedly present matters of policy to the Institute for its consideration in a perfected form.

"*Third.* That through the Inter-State Committee the representatives of States in which the School has grown strong numerically, financially and politically can render advice as to the best methods of procuring such legislation as would enable practitioners in the younger and less fortunate States to attain the same standing which their associates enjoy and which membership in the Institute gives them the right to demand."

In order that the objects of the Inter-State Committee may be best carried out it asks authority from the Institute for its Secretary to send out a separate notice to each State and county society inviting them to send duly accredited delegates to the next and each subsequent meeting of the organization, and notify them that such delegates will be privileged, in addition to the reports that they may bring, to offer such recommendations to the Institute as they may think advisable.

And further, that the Secretary of the Institute be directed to embody in the announcement of the next session of the Institute the time and place of the meeting of the Inter-State Committee, and that he add a notice of the manner of selecting and accrediting delegates, and any other announcements he may receive from the Chairman and Secretary.

J. B. GREGG CUSTIS, *Chairman.*

ALFRED W. BAILY, *Secretary.*

On motion, duly seconded, the report was received.

Both recommendations of the Committee were on motion adopted.

The notice to amend the by-laws was ordered held for action at the next meeting of the Institute.

REPORT OF THE COMMITTEE ON RESOLUTIONS.

DR. T. Y. KINNE: Your Committee on Resolutions would respectfully report the following:

Amend Section 3 of the Code of Ethics, after the word at the end of the fourth line, by adding, "or to assist unqualified persons to evade legal restrictions governing the practice of medicine."

We would recommend that this be added to Section 3, Article I., which covers the ground very thoroughly.

We recommend also the adoption of the resolution on child labor, offered by Dr. McDowell.

On motion of Dr. Geo. B. Peck, duly seconded, the report was adopted.

DR. O. S. RUNNELS: Mr. President, I would like to offer the following resolution:

Whereas, Changes have been made in the constitution and by-laws of the American Institute of Homœopathy providing for the concentration and incorporation of all subsidiary and Sectional Societies in the body of the Institute;

Resolved, That all Sectional and subsidiary Societies be and are hereby invited and urged to thus join the Institute and to become integral parts thereof.

On motion of Dr. O. S. Runnels, duly seconded, the by-laws were suspended. On motion of Dr. J. C. Wood, duly seconded, the resolution was adopted.

On motion of Dr. T. Y. Kinne, duly seconded, the Institute then took up the final consideration of the proper amendments to the by-laws providing that the former Presidents should constitute a nominating committee who shall present to the Institute a list of nominees for office. A discussion ensued, which finally resulted in a motion that the report of the Committee be reconsidered, and upon this being voted a further motion was made that the report be laid upon the table indefinitely. This was carried by a vote of 19 for and 17 against.

Dr. J. B. G. Custis: I would like to offer the following resolution:

Resolved, That a committee of five be appointed by the President to report at our next annual meeting upon the feasibility of an Institute of Drug-Proving, established in accordance with the plan outlined by Dr. H. P. Bellows, or any other which may be submitted.

On motion of Dr. J. B. G. Custis, duly seconded, the by-laws were suspended.

On motion of Dr. Jas. C. Wood, duly seconded, the resolution was adopted unanimously.

Dr. O. S. Runnels: Mr. President, by reference to the by-laws, you will find in Section 9 of Article VI. a provision that the President of each Sectional Society shall present to the general session such matters as may be of general interest to the profession.

By reference to that same article, you will see that last year we did a great deal of work trying to consolidate and concentrate and incorporate all the interests of the American Institute in one; that though in the past much has been done in order to get the ability and facility to work to the best advantage, we had to form Societies and go outside of the Institute to have accommodations. But that was hamstringing the Institute, robbing it of its power, and eventually tending to disintegration; that the very life of the Institute depended upon the concentration of effort, so that everything here was in and of the American Institute of Homœopathy, so that our work and equipment had to effect all purposes. By amendments of the constitution and by-laws we did all we could to effect that end, and by our action in the adoption of those amendments we sent a letter to everybody connected with the American Institute to come in and be one of us, and in Section 6 of Article VI. it was provided that the Institute shall recognize the following Societies as sections of its body: The Surgical and Gynecological Society of the American Institute of Homœopathy, the Ophthalmological, Otological and Laryngological Society of the American Institute, the Obstetrical Society, and the Electro-Therapeutical Society. And now, to complete that, by a resolution offered by myself, we decided to invite and urge all bodies, whether subsidiary or sectional, whether meeting in connection with this institute or in various parts of the country but germane to our main object, to come in and become a part of this great onsweep-

ing movement for the good of Homœopathy, not only in America but in the world. That will take in the Hahnemannian Society and all our Sectional Societies. Now, we want an organization so large and so complete in its ramifications and working order that everybody can be accommodated, and that we can thus achieve the cherished object of our lives. It is for that purpose that we have gone thus far. But there is much yet to be done; there is a great deal that is imperfect still. We must round off the corners, we must oil the journals and bearings and make our machine run smoothly, and to that end these reports are very necessary. And speaking for the Society of which I am chairman, which is the Surgical and Gynecological Society, I desire to say that we have had a most harmonious and successful meeting. We have had our irritations, we have had our disappointments, we have not had accommodation that was satisfactory. We were announced to meet in one building and were only to be found in another, so that that was not satisfactory. Another reason that has militated against our greatest usefulness this year is the fact that the general sessions have been so arranged that our work has been disjointed. Now, with twelve to fourteen hours between intersecting sessions you lose the trend of your thought and work, and the momentum is lessened. It should be so arranged hereafter, in my opinion, that a Sectional Society or a society beginning its work shall have continuous sessions until it is completed; solid work, right along. We are of the American Institute of Homœopathy, and there is no severance. All that we do and all that we say and all that we are, our influence, our fortunes and everything, are for the American Institute of Homœopathy.

Dr. T. Y. Kinne: Mr. President, in line with the remarks of Dr. Runnels, I make this motion:

Moved, that the Executive Committee be requested to confer with the Secretary of each of the Sectional Societies as to the time needed for their work, and that such time be included in the annual meeting of the Institute and so published in its circular.

This is in line with the work just given to us by Dr. Runnels. It gives the time for which these Societies ask. It gives them solid time, either before the business sessions of the Institute meeting, or subsequently, but at the same time it puts it under the aegis of the Institute. The notice is given in the Annual Announcement, and they become what they are now in fact, to the eyes of the world, a part of the American Institute of Homœopathy. I ask for a second.

Motion seconded.

The President: Before this motion is discussed I would like to state, for the justification of the Executive Committee which arranged this program, that the Chairman or President of each one of the Sectional Societies was asked for just this information, and every hour of time that he asked for before the program was issued was given him, and he was notified of the part of the week and the way it was arranged. I say that for the Executive Committee at the present time. Are there any further remarks?

The Secretary, Dr. Gatchell: In this direct connection I would like to state that I did not understand Dr. Runnels's statement, that

there was a hiatus between the different meetings. According to the schedule of the society on page 27, there seemed to be continuity.

DR. O. S. RUNNELS: I understand that, but you will observe that we had no session provided for in the morning. We feel, and the O., O. & L. Society feels, that we must have solid time to do good work.

DR. H. B. SCHENCK: I am heartily in favor of what Dr. Runnels suggests. It is impossible for any of the large sections to do work stretching their work over so long a time, and I see no other way than for the Institute to become truly a sectional society and let all sections go at the same time. That is the only way we can obviate it. And I would move you that a committee of five be appointed by the chair to take into consideration a revision of the by-laws making the Institute truly a sectional society, and report at the next meeting.

THE PRESIDENT: That is hardly an amendment to this motion that is already before us. The question will have to be put on Dr. Kinne's motion. Dr. Delamater, President of the Electro-Therapeutic Society, has the floor.

DR. N. B. DELAMATER: *Mr. President*, the President and Secretary of this Institute very kindly requested of the Electro-Therapeutists and Neurologists information as to what they wanted. We responded, and they gave us as nearly as they could what we wanted, at least that with which we were perfectly satisfied. The relation at present is this: We are acting in every respect as though we were an integral part of the Institute. We have not as yet, owing to the condition of our own by-laws, completely and formally announced ourselves as members. Now, I cannot say what our body will do when it comes to a vote. I believe that at the next session of this Institute we will be actually an integral part of this Institute.

THE PRESIDENT: We would be glad to hear from Dr. Norton, of the O., O. & L. Society.

DR. A. B. NORTON: I will only state my own personal opinion of the work this year. We have had, I think, eight or nine sessions on our program. We have simply not had the amount of interest that we have been having in recent years in our program. Our list of papers have been one-half those we have usually had, and there has not been the same amount of warmth and enthusiasm in our meetings, owing to this interval of time. We had to commence our meetings on Saturday in advance of the Institute, and carried it through until Thursday. Now, as has been stated, the arrangement in the O. & O. Society requires and fills three days of solid time—nine sessions. If it is to commence under the Institute wing, at the present time on Monday morning, and have the business of the Institute going on Monday, Tuesday and Wednesday, I do not see how this arrangement can be practically carried out until our by-laws have been made harmonious with it, until an amendment to the by-laws has been made. That is the only feature. If we can be giveu the time we want, it is all we ask. As to the relations of the O. & O. Society with the Institute at the present time, the matter has not been officially considered in the O. & O. Society at any time; the matter has never been brought up. The feeling of the O. & O. Society, as I understand it, is this: that

a very large majority, nearly the unanimous opinion, is that we want to know where we are before we officially become a member of this society. We have had experience, and we are simply waiting until we see what is going to be brought forth in the future; so that no action has been taken this year.

DR. R. S. COPELAND: As one of the members of the O. and O. Society I know that I voice the views of a good many when I say that while we are physicians and ophthalmologists, above and beyond it all we are Homœopaths, and we want to unite with this Institute. We are out on the frontiers, pushing back the borders, and we want to do all we can to advance Homœopathy, and for my part I want to be in the American Institute of Homœopathy, and have our Society there.

THE PRESIDENT: Dr. Ogden, Secretary of the Obstetrical Society, has the floor.

DR. B. H. OGDEN: The President of our society, the Obstetrical Society, is not here, but we are meeting with a distinct difficulty. The Surgical Society is formed, taking in Gynecology, and Obstetrics is a subject which is not of sufficient interest to form a separate society. The advances in obstetrics are largely in the surgical line, and in lines associated with gynecology. We have had two sessions, full meetings, well attended and much enjoyed, but we do not expect to publish our transactions; we have not enough paid members to meet the expenses of our Society. We can meet our running expenses, but to meet the expense of a stenographer is beyond the financial means of our Society. The work of the Society will be prepared by the Secretary and given to the General Secretary for publication in the general work. Now, it seems to me that if our Society is to exist as a separate society we must have financial support. With the great many different societies that we have, I very much doubt if we will have sufficient weight and membership to keep that Society going. It resolves itself into this: either we must have some financial support, that is, the cost of preparing the proceedings of the society must be met by the Institute, or else we must come back into the Institute as a Bureau. That is a live question with us. We had some seventy-five persons signify their desire to become members of the Obstetrical Society, but only fourteen paid anything. That is the difficulty.

THE SECRETARY, DR. GATCHELL: *Mr. President,* I have had some conference with Dr. Ogden, Secretary of the Obstetrical Society, on this subject, and I think I can add some information that will be of use, to the remarks he has already made. I think that it is perfectly feasible for the Institute to bear all the expense connected with the Obstetrical Society. If the Obstetrical Society will simply preserve an organization, elect its officers as it does now, and the Secretary conduct its business, and place copy in the hands of the Secretary of the Institute, that matter of expense is something that the Obstetrical Society should not have to consider. Moreover, I think it is incumbent upon the Institute, as it receives the benefit of all the work of the Obstetrical Society, that it shall also bear the expense when that work is given out to the Institute's two thousand members.

DR. O. S. RUNNELS: One more word, if I may be allowed, because we are on a very vital point right here, and that is in regard to expenses. These societies are, you know, independent, charging annual dues of $5, but our society cannot keep that up. You cannot pay $5 to the American Institute, $5 to the Surgical and Gynecological Society, and $5 each to the O. & O. and the Obstetrical Society, and so on, or you would run your annual dues up to $25 or $30.

DR. T. Y. KINNE: Nobody wants to.

DR. O. S. RUNNELS: No, we cannot do it, but we can make it $1. I am glad to hear the Secretary speak so kindly to the Obstetrical Society. Can you do the same thing for the S. & G. Society, pay the stenographer, so that we can abolish the dues and let the member who comes here get the Transactions of all of them?

THE SECRETARY, CH. GATCHELL: The Secretary is only one member of the Executive Committee, and I presume the entire Executive Committee should be consulted in asking that question. If I am permitted to speak just as one officer of the Institute, I will state that I think it can be done.

THE PRESIDENT: The question is upon the adoption of this motion, whereby the Secretary is instructed to confer with the officers of the Sectional Societies in arranging their times for meeting.

The motion was then put and carried.

DR. O. S. RUNNELS: *Mr. President,* in line with this, I move you that the Publication Committee be directed to co-operate with the proper officers of the Sectional Societies regarding the publication of each Society's proceedings in the Transactions.

Motion seconded by Dr. E. B. Hooker.

DR. T. Y. KINNE: This is following the line of the recommendation put forth by the committee appointed to discuss the change in the publication of the Transactions. You will remember that they suggested striking out certain things in the Transactions, which would give more space for the publication of the scientific part. This motion is tending to work along that line. It will cover the point raised by Dr. Ogden, the point covered by Dr. Gatchell, and the one expressed by Dr. Runnels. It is simply that the Publication Committee be directed to co-operate with the proper officers of the Sectional Societies regarding the publication of such Societies' proceedings in the Transactions. That is the object, and I ask for its adoption.

The motion was then put and carried.

AMENDMENT TO THE BY-LAWS.

DR. KINNE: I wish to give notice, sir, that next year there will be offered an amendment to the by-laws. It is offered with this intent, to accommodate ourselves to a recommendation as to the scientific work. Section 8, Article VI., provides, "The election of officers for the ensuing year shall take place on the second morning of the session, at ten o'clock, Sundays excepted." The motion which I made, you will observe, is in effect a lengthening of our sessions. It is the American Institute, meeting under the garb of the Surgical and Gynecological section of the Institute. I propose as an amendment to insert between the

words *"the"* and *"session"* in the second line the words *"business session of the Institute."* I simply offer that as an amendment.

THE PRESIDENT: The notice will be received and referred to the Executive Committee, to come up next year.

DR. H. D. SCHENCK: I think this whole matter should be taken up and considered by a committee of five, to prepare a smooth working organization, and in order to do that I move that a commitee of five be appointed by the Chair, to report at the next meeting a plan of work so that the next session will be a truly Sectional Society.

Motion seconded. It was then put and lost.

REPORT OF COMMITTEE ON ORGANIZATION, REGISTRATION AND STATISTICS.

DR. T. FRANKLIN SMITH: I was not in the session when the report of the Committee on Organization, Registration and Statistics was called for, and as it was in such an imperfect state that it would not be satisfactory to report, I would like to have permission given to that committee to perfect the report and have it printed in the transactions.

Motion seconded and carried.

REPORT OF SENATE OF SENIORS.

DR. J. H. MCCLELLAND: I am instructed by the Senate of Seniors to report on the question of ethics referred to it two or three days ago, in reference to the case of Dr. W. A. Shepard. The committee wishes to report that it has carefully gone over the subject, examined the papers presented to it, and as directed by the Senate of Seniors it recommends to the Institute the expulsion of Dr. W. A. Shepard from the American Institute of Homœopathy on account of violation of the Code of Ethics.

Seconded by Dr. O. S. Runnels.

After considerable discussion, participated in by a number of members, and which resulted in Dr. McClelland exhibiting an advertising card which was used on the street cars in the city where the Doctor resides, the report of the Senate of Seniors was adopted.

DR. D. A. MACLACHLAN: I hereby give notice that I shall offer an amendment to the by-laws, Article X., to the effect that the decision of the Senate of Seniors shall be final in all cases involving violation of the Code of Ethics, without excepting the cases requiring disciplinary action.

DR. A. W. BAILY: I hereby give notice that I will offer an amendment to Section I., Article 7 of the by-laws, to make the Committee on Life Insurance a regular standing committee.

THE PRESIDENT: The notice is accepted and the amendment is referred for action next year.

DR. A. B. NORTON: I hereby give notice of an amendment to the by-laws, Article 9, Section IX., in regard to the selection of a place of meeting. I would amend it so that the Executive Committee is instructed to report to the Institute a recommendation of three places which, in their judgment, are most available for the meeting of the Institute, the same to be voted upon, and a selection made by the Institute as a whole.

THE PRESIDENT: The notice is accepted and the amendment is referred for action next year.

DR. A. W. BAILY: I move that the President be requested to appoint a committee on Life Insurance as a special committee for this year.

The motion was duly seconded and upon being put to vote was carried.

THE PRESIDENT: The Hahnemann Monument Committee has the floor, Dr. J. H. McClelland, Chairman.

DR. J. H. MCCLELLAND: I will only say that the work of the Committee, I am sorry to say, is not done, but inasmuch as there is no place on the program for its report I did not prepare a written report. However, I will report, as it has been called for, for there are certain matters of detail still unfinished, as, for example, we found that the entablatures were imperfectly made in some particulars, imperfectly set, and we have been actively engaged in having them repaired and the difficulties corrected. Further than that, by the bequest of Dr. Nancy Williams, a sum of money was left for the use of the Monument Committee, and the suit is now in litigation, so that the work of the committee, I am rather sorry to say, is not finished.

A MEMBER: How much have you got in your own hands?

DR. J. H. MCCLELLAND: We have sufficient money, about a matter of $5,000, to cover such matters as have not been adjusted; as, for example, the granite company still have a claim which the contractor has not seen fit to settle, and our attorneys have directed us to hold the money until those claims are settled, so that while we probably have sufficient to cover what will finally be called upon, we still have some matters that are not adjusted. Furthermore, if you will allow me, I would suggest that some Committee, this Committee or some other, be continued as a standing committee, for the reason that in so important a work as that there should be some supervision upon the part of this body which donated it, and as that supervision has to be continued from year to year to see that the monument does not go to pieces or become in any way impaired, I think it would be quite proper to continue the Monument Committee.

DR. KINNE: I move that the report of the Committee be received and the Committee continued.

Motion seconded and carried.

DR. J. H. MCCLELLAND: Just one more item. The Committee have a number of copies of the report, the monument book, here, and any members who have not received it can obtain copies of it, those who are entitled to it, free of charge.

THE PRESIDENT: I wish to announce the appointment of the following Special Committee to report on the advisability of establishing an Institute for Drug Proving:

Dr. J. B. Gregg Custis, Washington; Dr. George Royal, Des Moines, Iowa; Dr. Charles Mohr, Philadelphia; Dr. W. A. Dewey, Ann Arbor, Mich.; Dr. B. F. Bailey, Lincoln, Neb.

The Institute then adjourned until 9:30 a. m., Saturday.

SIXTH DAY

SATURDAY, JUNE 27, 1903

The Institute was called to order by the President at 9:30 a. m.

DR. GEO. B. PECK, on behalf of the Board of Censors, reported as follows:

Of the nine names presented yesterday, seven were of those who had conformed entirely with the requirements for admission. We recommend that these seven be elected to membership. We recommend also that the two other applicants be elected to membership when all conditions shall have been complied with.

DR. J. R. HORNER moved to suspend the by-laws, which motion prevailed.

DR. J. R. HORNER then moved the adoption of the report of the Board of Censors, carrying with it the election of these candidates for membership, which motion prevailed, and it was so ordered.

The report of the Committee on Homœopathic Pharmacopœia was presented, and on motion of Dr. Gatchell referred to the Committee on Publication.

REPORT OF THE COMMITTEE ON PHARMACOPŒIA.

Your committee begs leave to report that since the publication of the second edition of The Homœopathic Pharmacopœia of the United States, it has generally been accepted as the standard work on the preparation of medicines used by homœopathic practitioners. In the colleges having pharmaceutical laboratories, the work is recommended as a text-book to the great advantage of the students, and it is hoped all homœopathic colleges will adopt the work for the guidance and instruction of students of homœopathy, as the book is not only adapted for the professional pharmacist, but also to the needs and uses of the practitioner of medicine.

Scarcely any changes are necessary as the work now stands, but to meet the requirements of the future, the continuance of the committee by appointment of the American Institute of Homœopathy is desirable, so that its members may take into consideration questions of revision or such additions as may be suggested, and to be prepared to publish without any unnecessary delay the third edition when demanded. Respectfully submitted, C. MOHR, *Chairman.*

The Committee on New Membership from the Local Committee of Arrangements, reported through Dr. Wells, its sub-chairman, the work of that Committee in obtaining new members for the Institute. Dr. Wells also served as Chairman of the Committee of the Institute in this capacity. Dr. Wells gave an extended explanation of the work of the committee and said they had come to the conclusion that about one hundred of the new members of the Institute this year were secured through the effective work of his organization.

THE PRESIDENT called upon the acting Registrar for a report of the registration.

DR. J. R. HORNER: *Mr. President:* I would report that there are 57 seniors and 458 members registered. The attendance of visitors has been probably upwards of 700, making a total attendance of about 1,200.

THE PRESIDENT: I wish to read the list of appointments that have been made for the following year, and in doing so to say that it has been the effort of your President to distribute these appointments as well as possible over all parts of the country represented by the Institute; to select the names of those who are recognized as good workers, and not to change certain positions where a continuance in office is at times desirable.

The President the read the list of appointments:

(For the appointments, see list of "Committees" and Bureaus, in the opening pages of this Volume.)

DR. T. Y. KINNE: I hereby give notice that I shall offer next year an amendment to the by-laws with regard to the Nominating Committee, as follows:

Nominations shall be made by the ex-presidents of the Institute, who shall constitute a nominating committee. They shall organize by the election of a chairman and secretary at each session of the Institute, who shall assume office at the close of the session at which they were elected. The members of this committee shall file with its secretary before the opening of each session of the Institute a list of nominees for each elective office. From this list the members of the committee present at the session shall at 10 o'clock on the first morning present at least one name for each office.

Any member of the Institute receiving the indorsement of ten members shall be considered a nominee, provided such nomination is filed with the secretary of the Institute by 12 o'clock of the first morning. All the nominees of the nominating committee shall have a star placed opposite their names on the official ballot.

THEO. Y. KINNE.

DR. CHAS. E. WALTON: Mr. President, I move an amendment to Article V., Section 1 of the By-Laws, as follows: After the word "standing," in the fifth line, add the words, "and is legally qualified to practice medicine in the State where residing."

I also move an amendment to Section 2 of the same Article as follows: Change the year "1901" to "1903," and change the word "three" to "four."

DR. CHAS. GATCHELL: At the request of the Chairman of the Committee on Drug Proving, Dr. Eldridge C. Price, I move that the Institute authorize the Committee on Drug Proving to carry out the recommendations made in its report.

This motion, being duly seconded, prevailed.

DR. GEO. B. PECK reported the total number of new members was 162.

On motion of Dr. A. B. Norton, duly seconded, the following resolution was adopted:

RESOLVED, That the American Institute of Homœopathy hereby tenders a hearty vote of thanks to the Local Committee of Arrangements, to the gentlemen acting as guides, and to the local profession, for their united, untiring and successful efforts in making this, as it has been, an unexcelled meeting.

On motion of Dr. A. B. Norton, duly seconded, the thanks of the Institute was tendered to its President and to the Executive Committee particularly, for their effective work in planning and carrying out the arrangements for the very successful plan of work that has been newly adopted.

The motion to adjourn having been made and passed, the President declared the fifty-ninth annual meeting of the American Institute of Homœopathy adjourned *sine die.*

BUREAU OF HOMŒOPATHY

BUREAU OF HOMŒOPATHY

THEO. Y. KINNE, M.D. *Chairman.* WALTER G. CRUMP, M.D. *Secretary.*

ADDRESS BY THE CHAIRMAN.

ON THE MODE OF ACTION OF DRUGS IN THE CRUDE FORM AND IN DILUTE SOLUTION, WITH AN ATTEMPTED INTERPRETATION OF HAHNEMANN'S THEORY OF DYNAMIZATION.....CH. GATCHELL, M.D.

DISCUSSION: *L. L. Danforth, M.D.; C. B. Gilbert, M.D.; Edw. Rushmore, M.D.; Wm. L. Morgan, M.D.; Robert Walter, M.D.; A. H. Tompkins, M.D.; Conrad Wesselhoeft, M.D.; Eldridge C. Price, M.D.; A. E. Austin, M.D.*

HOMŒOPATHY AND EHRLICH'S HYPOTHESIS....ALFRED DRURY, M.D.

DISCUSSION: *Charles Mohr, M.D.; C. B. Gilbert, M.D.; Ch. Gatchell, M.D.*

SYMPTOMS, THE BASIS OF INDIVIDUALIZATION, PEMBERTON DUDLEY, M.D.

DISCUSSION: *Robert Walter, M.D.; J. B. Gregg Custis, M.D.; C. B. Gilbert, M.D.; Eldridge C. Price, M.D.; C. Mohr, M.D.; G. P. Waring, M.D.; E. B. Nash, M.D.*

THE EXAMINATION OF THE PATIENT....THOS. G. M'CONKEY, M.D.

DISCUSSION: *C. B. Gilbert, M.D.; Eldridge C. Price, M.D.; J. H. Sherman, M.D.; W. A. Paul, M.D.; J. T. Simonson, M.D.; Edward Rushmore, M.D.*

THE KEYSTONE OF A PRESCRIPTION.....H. C. ALLEN, M.D.

THE KEYSTONE OF A PRESCRIPTION..CLARENCE WILLARD BUTLER, M.D.

DISCUSSION: *C. B. Gilbert, M.D.; Gaius J. Jones, M.D.; Edward Rushmore, M.D.*

BUREAU OF HOMŒOPATHY

ADDRESS BY THE CHAIRMAN

THEO. Y. KINNE, M. D.

In compliance with the request of our Executive Committee it becomes the duty of Bureau Chairmen to outline the work done; indicate in a general way what should be accomplished for the future, and give a bird's-eye view of its particular field and note what, if any, progress has been made.

One year ago a forward step was taken when the Inter-Collegiate Committee reported a set of resolutions which were unanimously adopted and have become the fundamental thought of this Institute. They read as follows:

RESOLVED, That the teaching of the principles of homœopathy, as enunciated in *Organon, homœopathic pharmaceutics* and the *homœopathic materia medica,* be continued throughout the entire four years' course. The *Organon and homœopathic pharmaceutics* at least one year, and the *homœopathic materia medica* at least three years.

"RESOLVED, That the clinical teaching in our schools should be brought into the greatest attainable harmony with the teaching of materia medica.

"RESOLVED, That we disapprove of and discountenance all teachings which give approval to what is known as the purely empirical use of medicines, for the use of proprietary medicines and combination tablets, believing that such teaching is productive of confusion in the minds of students, subversive of the principles of homœopathy, and that it tends to retard true progress in the establishment of a scientific materia medica and therapeutics."

The colleges feel the pulse of the profession in two ways: the number of students attending, and their thorough acceptance of and belief in the principles of homœopathy. Last year but two hundred persons graduated from our colleges; this year a less number.

The less distinctive our schools are, the fewer will be the number of attendants. When differences exist but in name, individuals will follow the crowd; especially, if there seems an enlarged sphere of opportunity. Not one-half the nominal homœopaths in this country are homœopathic graduates; and yet, taking both classes into consideration, homœopathy is not keeping pace with the increase in population. The laity are in advance of us; and, though personal

popularity for a time may hold a clientele, still intelligence and education are more and more demanding unadulterated homœopathy. Again, there is a spirit of unrest in the profession, as in reasoning together of righteousness and judgment to come, there is coming the conviction that the flesh-pots of Egypt are not to be compared to the manna of promise. I hazard the statement that a large number of our specialists are awaking to the fact that homœopathic medication is a necessary weapon in their armamentarium; and I venture the prediction that the more they take into account the Hahnemannian gospel, the larger will be their percentage of success. I can chronicle but little of actual progress made in the recent past; but remember the marshaling of the clans precedes the forward march; and, as I listen attent, I seem to hear "the sound of a going in the tops of the mulberry trees," which presages a victory, if we bear an unsullied banner. While our allopathic friends are saying, "Lo! here, and Lo! there," in search of fundamental truth, we, its professors, press steadily on, confident of our cause and knowing whereunto we are called.

Why is not our march triumphant now as in years gone by? It is an axiom that our geometrical progression has become simply arithmetical proportion, and for this there are reasons. First, because you and I have not so consistently practiced what we professed. Second, and consequent upon the first, we have not taught our dependents the rudiments of our belief, or thoroughly grounded our students in the faith of our fathers. Third, we have been too much occupied in our personal success, and cared too little for the common weal. How shall we retrieve what is said by some faint-hearted or backslidden ones to be almost a lost cause? Shall we accomplish our purposes by accepting the cover of our enemy's blanket till we are warmed to suffocation? Will we receive the husks of starvation at his hands? Will we parade the gewgaw of affinity and cast aside the pearl of independent purity? Will you wear a collar or a sword? Shall we sell our birthright for a mess of pottage? If so, then let us lie down with the lion; but, where is the lamb?

Another advance in the right direction is the recently authorized Bureau of Homœopathy in this Institute. Its object is to aid practitioners in much the same way as the systematic teaching for students in colleges. It should be to the busy man a freshening and re-enforcing of fundamental principles. To me, it seems a form of post-graduate course in homœopathy. Here clinical experience substantiates theory, and each verifies the other. Like commentaries on the Bible, individual perceptions throw side-lights upon the text; giving added and

enlarged views of that which was seen as through a glass darkly. It will help to differentiate essentials and non-essentials, polishing the facets of the diamond Truth, and clarify our understanding of the Master's wisdom. The sooner we return to first principles, the stronger will be our position. Some may have erred in exclusiveness, but even their failings leaned to virtue's side. Our fathers had a numerous progeny, but it was unceasing midnight toil which crowned their efforts with success. Should we not emulate their zeal and thus receive their reward? In fact, the only excuse we have for being and doing, is what we may transmit to posterity. We should hand down to it the treasure-trove that we received, if possible, with value enhanced through right use of talents bestowed.

Some there are who appear to feel that the apparent disintegration of our Association but anticipates the destruction of all for which we heretofore have labored. Not so: lopping off, the branches for the time being, interferes with symmetrical growth; yet, through it all, the root still lives and will put forth sturdier branches whose fruitage shall be richer and more abundant than before. Not one of us will cry peccavi; but, watching out for shoals and rocks, extirpating the teredo that insidiously scuttles the ship, we shall, with adjusted compass, sail over placid seas and bear our precious cargoes to quiet anchorage in the harbor of content. Emasculated? No. Proved and invigorated? Yes. The majority are faithful and true; growing upward as surely and steadfastly as the needle points to the pole, and giving comfort and strength to all who seek their protection. Fear not, brothers, though stress may straighten your enviroment and cloud your onward way, above all, truth sits calmly triumphant, and you, her almoners, shall find the reward that fidelity merits and receives.

To assist in the consummation has been our aim this year. The topics brought before you for thought and discussion are based upon the Organon, and will tend to elucidate its propositions. Moreover, we have endeavored to present food for the thoughtful to digest. Taking our scientists on their own ground, and carrying their hypotheses to a logical conclusion, we find the possible *how* our remedies act; the *why,* to some extent, we already know. Sure it is that nothing evolved can shake our foundation; while research in any and every field will make more perfect and enduring the glorious fabric whose master-workmen was our immortal Hahnemann.

ON THE MODE OF ACTION OF DRUGS IN THE CRUDE FORM AND IN DILUTE SOLUTION, WITH AN ATTEMPTED INTERPRETATION OF HAHNEMANN'S THEORY OF "DYNAMIZATION"

CH. GATCHELL, M. D.
CHICAGO

The mode of action of drugs in the animal system is a subject which has engaged the attention of the most earnest minds. The fathers of medicine were not without their theories, which, in accordance with the limited knowledge of their days, were necessarily crude and erroneous.

With his extraordinary and masterful mind, Hahnemann also gave expression to his views on this important subject.

It is my purpose in the present paper to submit for your consideration an attempted explanation of the mode of action of drugs, both in the crude form and in dilute solution, and also to present what appeals to me as being a rational interpretation of Hahnemann's theory of "dynamization," all based upon the modern theory of electrolytic dissociation.

At the meeting of the American Institute of Homeopathy in 1898, E. H. S. Bailey, Ph. D., Professor of Chemistry in the University of Kansas, U. S. A., in an intensely interesting and very original paper,[1] in accordance with the terms of the theory named, made clear the changes that take place in the process of solution of drugs, and, in a manner which seemed to satisfy the demands of accurate knowledge, he so explained the matter as to give increased confidence to the homeopathic physician in the potency of his attenuations.

As applied to the problems to be discussed in the present paper, the theory of electrolytic dissociation teaches that matter in solution consists, not of divided particles of the original substance in its molecular form, held in suspension in the solvent, but that in undergoing solution the molecules of the original matter become split up (dissociated) into ions, which are atoms, or groups of atoms charged with electricity.[2]

(1) "The Proof of the Law of Similia from the Electro-Chemical Physiological Standpoint." Transactions of the American Institute of Homeopathy. 1898.

(2) Ions are atoms or groups of atoms which have the same composition as the substances which are formed from the electrolyte by the action of the electric current. Ions are charged with electricity. "Physical Chemistry." By Dr. Ch. Van Deventer, Amsterdam, Holland. 1897.

Ions are of two kinds, cations, which are charged with positive electricity, and anions, which are charged with negative electricity.

The splitting up of the electrolyte[3] into ions is called "dissociation."

The amount of dissociation depends upon the degree of solution. In a complete solution there are no molecules of the original matter present; only ions, into which the molecules have dissociated.

For instance, a watery solution of potassium-chloride does not consist of the solvent holding in suspension an infinite number of molecules of KCl; it consists of water having in solution ions of K and Cl.

But if the degree of solution is not so great as to have dissociated all the molecules, then the solvent contains some undissociated particles or molecules of the original matter, and some ions.[4] With increase in the amount of solvent more of the molecules of the original matter become dissociated, until finally the dissociation of molecules is complete and the solution contains only ions.[5]

This knowledge leads us to the next important fact, which is that the properties of a solution are not the properties of the original matter, but the solution has new properties, which are determined by the ions, into which the original matter has become dissociated. The new properties represent the sum of two constants, the one the cation and the other the anion.[6]

The application of the theory of electrolytic dissociation to an explanation of the action of drugs in the animal system follows from what has already been said.

Medicines prepared according to the method of Hahnemann consist of solutions, or, as we call them, "dilutions" of the crude drug. Our dilutions—when of sufficient degree of attenuation—contain none of the crude drug, or its molecules, in original form. All attenuated preparations of medicines—"dilutions"—are solutions of ions, of the two kinds, cations and anions.

Consequently when introduced into the animal system our dilute solutions of medicines act, not by virtue of the properties of the orig-

(3) An electrolyte is a substance capable of conveying electricity by the movement of ponderable particles.

(4) In the case of electrolytes in incomplete solution a part of the substance exists as the original molecule, and a part is dissociated into its ions; as the solution is further diluted, more and more ions are formed, until finally the substance is in a complete state of dissociation; that is, all the particles are ions." E. H. S. Bailey, Transactions of the American Institute of Homeopathy. 1898.

(5) In all the strong acids, bases, and most of the salts the dissociation is complete at about one-thousandth normal.

(6) "The properties of a solution are the same of a constant for the cation and a constant for the anion."—H. C. Jones, Ph. D., Instructor in Physical Chemistry Johns Hopkins University, Baltimore, Md., U. S. A.

inal crude drug, but by virtue of the properties of the ions, into which molecules of the original drug have become dissociated.

Let us, now, inquire into what way the ions of the medicine act upon the animal system.

The proposition may safely be made that in the biochemical changes taking place in the animal system (as also in inorganic chemistry),[7] all processes in which solutions of electrolytes take part are due to the direct actions of ions upon ions.[8]

Moreover, it may be stated that medical substances in solution do not act upon formed matter.

There is no action directly upon the muscular fibre, upon connective tissue, or upon the cells of parenchymatous organs. The action is in every instance upon the nuclei of the cells.[9]

In the composition of cell nuclei water represents 98 per cent. In solution in the nucleus are the ions of the body.[10] When drugs in dilute solution are introduced into the body, the ions of the solution are carried to the nuclei of the cells. Here it may be assumed that ion acts upon ion. As a result of such action changes are wrought in the nucleus of the cell. These changes, secondarily, exert an effect upon the cell itself, and by this means nutritive processes are affected, functional activity is altered, and changes in the system are produced. It is in this way the medicinal substances act in producing the changes in the system which result in the cure of diseased conditions. This may be claimed to be the mode of action of drugs when introduced into the system in dilute solution; this is therapeutic action.[11]

But, as is so well known, medical substances, according to the

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(7) "Chemical reactions in which acids and bases are involved are known to be reactions involving only ions, molecules, as such, not coming into play. The number of reactions known to be purely ionic is very great, including the majority of cases with which we have to deal in chemistry."—H. C. Jones, Ph. D., Instructor in Chemistry Johns Hopkins University, Baltimore, Md., U. S. A. "Johns Hopkins Hospital Bulletin," June, 1898.

(8) The power of a frog's muscle to absorb water in the presence of acids is dependent upon the number of hydrogen ions present—upon the dissociation of the acid.—Jacques Loeb, Ph. D., Professor of Biology in the University of Chicago, U. S. A.

"All that the spermatozoon needs to carry into the egg for the process of fertilization are ions."—Jacques Loeb, Ph. D. "The American Journal of Physiology," Vol. III., No. 3.

(9) "The dynamic influence of drugs is exerted upon the living matter of the body—upon its protoplasm."—Richard Hughes, M. D. "Manual of Pharmacodynamics," Fifth Edition. 1886. Page 60.

(10) C. Schmidt calculates that one blood-cell contains about one-billionth part of a gramme of potassium-chloride. This corresponds to the tenth degree of decimal dilution. Hence there are only ions present; no molecules.

(11) In this discussion the chemical and mechanical action of drugs is not being considered; only the physiological or therapeutic action.

size of the dose administered, have two different effects in the system, called the primary action, and the secondary action. A poisonous dose of the crude drug produces the primary effect; the drug in dilute solution produces the secondary effect.

Now, in the crude drug the molecules are undissociated, or, but partly dissociated. Consequently a solution of the crude drug is a solution of molecules, with no ions, or with but a limited number of ions. Therefore, the mode of action of a crude drug in the system is determined by the molecules, and is the action of molecules. The molecules, like the ions, are conveyed by the blood to the nuclei of the cells. It is in the nuclei of the cells that their effort is exerted.

The action of the crude drug is of a contrary nature to the action of the same drug in dilute solution. This is equivalent to saying that the action of molecules on the nuclei of the cells differs from the action of ions; and the effect of the action of the molecules is opposite in character to the effect of the action of the ions. The one, in the nuclei of the cells, disturbs and inhibits functional activity; the other stimulates functional activity.[12] The one is the action of molecules, the other is the action of ions.

Therefore, as a conclusion to what I have here set forth, I would submit the following propositions:

1. That the action of concentrated solutions of medical substances in the animal system is the action of the molecules of the substance.

That the effect of the action of the molecules is to depress function and to disturb nutrition, and represents primary action.

2. That the action of dilute solutions of medical substances is the action of the ions.

That the action of the ions is to stimulate function and promote nutrition, and represents the secondary action.

To the theory of electrolytic dissociation we may look not alone for an explanation of the mode of action of drugs in the system, but as it appeals to me, it offers as well an interpretation of Hahnemann's theory of "dynamization."

Although the dual action of the drugs was recognized before Hahnemann's time, yet it was owing to his genius that the facts were established on a scientific foundation.

Hahnemann observed in the effect of drugs on the system two different methods of action, determined by two different methods of preparation. The crude drug, he found, had a pathogenic effect; it

(12) "Every substance which in large doses abolishes the property of an organic element stimulates it if given in small doses."—Claude Bernard, quoted by Richard Hughes.

is a disturber of function, and a degenerator of tissue. He found that the same drug in dilute solution acts in disease to restore the system to the normal performance of function, to arrest degeneration and to promote healthy cell growth.

Furthermore, Hahnemann not only found that dilutions of active agents acquired properties not belonging to the crude drugs, but, what was still more out of the line of ordinary experience, he also found that substances[13] which in crude form were inert as medicinal agents, acquired therapeutic powers when prepared in dilute solutions.[14]

Here was an entirely new phenomenon, with which the world of medicine never before dealt.[15]

The inference that the facts which I have stated presented to Hahnemann's mind was that substance in dilute solution possesses some newly-acquired property, some newly-developed force, absent in the original substance.

This newly revealed phenomenon relating to the action of medicinal substances called for explanation.

Possessed as he was with a philosophical mind, Hahnemann readily proffered a theory. He attempted to account for the new display of energy on the part of the dilute solution by attributing to it the requirement of the development of a new force, which he called "dynamic." This "dynamic" force was considered by Hahnemann to be of a "spiritual" nature, and in describing it he used the term "spirit-like" and "dynamic" interchangeably.[16] In the light of the knowledge of his day it is not surprising that Hahnemann should have sought to account for the unusual phenomena that he observed by attributing them to a "dynamic," "vital," or "spirit-like" force. At that time the world of biological science was not yet free from the influence of the school of Montpelier, sustained by Borden and Barthez in France, by Reil in Germany, and by Erasmus Darwin in England.

These teachers in biology had an immense influence on the thought of the day, and to a vague "vitalism" was attributed all the phenomena of organic life. Hahnemann shared these views. He looked

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(13) Such as silicea, calcarea carb., natrum muriaticum.

(14) "There is no such thing as a perfectly insoluble substance." "The Scientific Foundations of Analytical Chemistry." Wilhelm Ostwald, Ph. D., Professor of Chemistry in the University of Leipzig.

(15) "Solubility is only compartive. Some substances are more soluble than others."—E. H. S. Bailey, Ph. D., Professor of Chemistry in the University of Kansas, U. S. A.

(16) "The physician cannot free the vital force from morbid disturbances except by the spirit-like (dynamic) powers of remedies."—Organon. Sec. 16. Wesselhoeft's translation.

upon disease as being a disturber of the "vital" force,[17] or, as he called it, the "spirit-like dynamis."[18]

Thus influenced by the prevailing doctrines in biology, Hahnemann sought to explain the observed phenomena of the action of dilute solutions in consonance therewith.[19] To this we owe his theory of "dynamization."

This theory, as advanced and explained by Hahnemann, has been long since rejected by the leading thinkers of our school. Various explanations of the potency of drugs in attenuation—which it is known that they possess—have been offered by many observers, but, for the most part, our most earnest thinkers have been willing to accept the fact and to await the explanation.

But, as it apears to me, the time has come when an explanation is offered for which final acceptance may be asked.

I would submit for the consideration of the members of the Institute that the theory of electrolytic dissociation gives the explanation of the potency of drugs in dilute solution.

I would further submit that electrolytic dissociation also affords for Hahnemann's theory of "dynamization" an interpretation which is in accord with the accepted teachings of modern science.

In the light of this doctrine Hahnemann's theory becomes clear and reasonable. It may be thus stated:

The crude drug consists of molecules; the dilute solution consists of ions. Molecules are electrically neutral; ions are electrically charged. Consequently, when in dilute solution the drug is in a radically altered state. It has developed a form of energy (electric) which in molecular state it did not possess.[20] In its altered state the substance is possessed of new properties. By virtue of the new properties thus developed, substances which before solution had one effect on living cells, now, after dilute solution, have another effect.

Hahnemann, observing in medical substances, with altered form a new display of energy, and also observing evidences of newly-acquired forces in substances previously inert, sought an explanation for these

(17) "Diseases are produced only by the morbidly disturbed vital force." —Organon, Sec. 12.

(18) "The spirit-like dynamis (vital force) animating our body."—Organon, Sec. 15.

(19) "Healing remedies restore health only by virtue of their dynamic action on the vital force."—Organon, Sec. 16.

(20) This new form of energy is not, of course, a creation of force, but, in accordance with the law of the correlation of forces, to which there is no exception, it is a transmutation of chemical energy. The atoms composing the molecule are held in combination by chemical energy. When the molecules become dissociated into ions the chemical energy becomes converted into electric energy.

unusual phenomena. In so doing, he evolved his theory of "dynamization." According to this theory Hahnemann assumed that in dilute solution the medicinal substance acquired a new force which he variously termed "spiritual," "vital," or "dynamic."

When we consider the state of knowledge of chemical and biological processes as it existed in Hahnemann's time, his theory cannot be looked upon as being violent. But now it cannot be accepted.

Today, however, we may interpret Hahnemann's thought anew. In the light shed upon the subject by the developments of modern science it may be announced as an established fact that medicinal substances in dilute solution do acquire a new form of force, by virtue of which they become endowed with new properties.

The changed condition of the medicinal substance on undergoing dilute solution is that of ionization (electrolytic dissociation); the newly-acquired force is the electric energy with which all ions are charged.

In the manner here indicated may the theory of "dynamization" be interpreted. And, with reference to the subject involved, in this closing year of the nineteenth century, Samuel Hahnemann again is vindicated.

DISCUSSION

L. L. DANFORTH, M. D.: I have been delighted to listen to the paper of Dr. Gatchell. It is a scientific explanation of homœopathy for which we have all been looking for many years. It is, as Dr. Gatchell says, a subject which it is difficult to discuss. Perhaps we are not prepared to discuss it at the present moment. It is the modern, or the latest, presentation of the scientific aspect of the subject, and I would like to move that Dr. Gatchell be given a vote of thanks for his very masterful and scholarly presentation of this difficult subject.

The motion of Dr. Danforth, duly seconded, unanimously prevailed.

CHARLES B. GILBERT, M. D.: I do not know who, but some homœopathic physician twenty-five or thirty years ago, wrote an article in one of the journals, in which he claimed that the relation between the drug and the patient was the relation between positive and negative.

EDWARD RUSHMORE, M. D.: I do not profess to be sufficiently acquainted with chemistry to discuss critically the points connected with it, but there is a certain relation between homœopathic healing and the action of homœopathic medicine, in regard to which I am not able to appreciate the weight of the writer's able remarks. He referred to the action of homœopathic remedies by olfaction, and I would like to ask the writer if the chemical theory herewith suggested would help us in the interpretation of that line of facts?

CH. GATCHELL, M. D.: In order for a drug to exert action in the body I assume that there must be the entrance of some of the medicinal substance; and it is not at all impossible that ions may be given off from the surface of the fluid solution; some of these ions must enter the body through the mucous surface by olfaction. That, I think, is entirely possible.

WM. L. MORGAN, M. D.: I have been much interested in the late discoveries of radium and barium. It is one of the most interesting subjects that I have ever met with, and Dr. Gatchell's paper confirms my opinion exactly.

There are many other points in this question that I have taken deep interest in for several years, but it is so well explained in Dr. Gatchell's paper that it is useless for me to undertake to make further explanation, but every word in the paper is corroborated by observation on the action of the dynamized drug.

ROBERT WALTER, M. D.: I wish to suggest that the first important question involved in any such discussion would be an examination into the nature of disease. We are undertaking to treat a thing whose essential nature has not been established. Hahnemann, as I learn from the paper, assumed that disease was a something, and that drugs have the power of curing that disease. Physicians admit that they do not understand just what it is that they are treating. They assume that it is a destructive process going on in the human organism; but eminent physicians dispute that assumption, and claim that disease is a curative process going on in the human organism. Whether it is a curative process or a destructive process, is the important question to decide. If it should prove that appearances in this respect are very different from the reality, if it should prove that disease is a curative process, as Newton proved that the sun does not revolve around the earth, in spite of all appearances to the contrary, if it should be proved that this thing called *disease* is the effort of nature to restore normal conditions, then, I opine, that the process of cure, that the influence of the medicine would have a different effect or appearance, and that the result would be achieved in a way different from those which are generally assumed to be correct. I suggest that the American Institute of Homœopathy take up this subject, and, if possible, settle it, namely: as to the nature of the thing that is to be treated, in order that we may arrive at correct conclusions as to how medicines, diluted or dynamized, produce the effects which we observe. None of us disputes the power of medicine which has been properly diluted, in changing the patient's conditions and contributing to his cure; but how they do it is the question still before this Institute, and before the world. That has not been

settled, and it will not be settled, as I believe, until the true nature of disease has been established.

A. H. TOMPKINS, M. D.: I want to say, ladies and gentlemen, that I have been greatly interested in Dr. Gatchell's paper. It is surely a commendable effort to tap the latest science in our behalf and throw new light on the hidden things of homœopathy. We must all appreciate as well, I think, the difficulties which the essayist has had to contend with in treating this subject; for, however new and important the ground of one's topic, a sense of the limitation of the time and space at one's disposal will intrude itself and force him to leave some points less well elucidated than he could wish.

It is not so grateful a task as this acknowledgment of our debt to Dr. Gatchell, to attempt to show the difficulties in the way of accepting the new light "on the mode of action" of our drugs which he would bring us from the new hypothesis regarding the dissociation of matter by hyperdilution; but to me these difficulties seem not easily to be overcome. Let us review, briefly, Dr. Gatchell's most important propositions. He says:

1. That high degrees of dilution of a drug separate its molecules into ions and that something entirely different in its effects upon the body is thus produced.

2. That there remains, however, a constant relationship between the effects upon the body of drugs so treated and of the same drugs in a crude or slightly diluted state.

3. That this relationship is one of contrariety; that drugs which have not had their molecular elements dissociated by hyperdilution have a hurtful influence upon the health, by inhibiting function, while the same drugs, when represented by their ions, have as uniformly a beneficial effect by stimulating function, even when given to persons in health.

4. That mixed effects flow from the exhibition of a drug which, in its degree of dilution, occupies the border line, thus having only a part of its molecules broken up into their ions.

Now there is undeniably no little evidence pointing toward molecular dissociation by hyperdilution. It is some time since the data were before me, so that I may need correction in stating that evidence. It is found that the resistance of distilled water to the electric current is lessened by the addition to the water of extremely dilute solutions of almost any substance, while the resistance is increased when a strong solution of the same substance is added. Now students of electricity have for some time, as I understand, agreed that the passage of electricity through a solution is accomplished by the breaking up of the

molecules of the solution into ions; and the necessity of this action constitutes what we call the resistance of the solution; consequently when it was found that the resistance of water was measurably lessened by the addition of highly diluted substance the inference was natural that the ions of such substances must have been set free by the degree of dilution, thus furnishing an easier pathway for the electricity.

Do we really know anything further of the possibility or the effects of dissociation than that?

Perhaps the strongest evidence against the fact of dissociation is to be found in the circumstance that the dilution supposed to be required therefor (and we do not need to go outside the range of a moderately low potency to get this degree of dilution) does *not* produce from the crude drug something entirely different in its effects upon the body; for we have believed that the very existence of any substance depended upon the integrity of its molecules, or, in other phrase, that the molecule was the smallest part of any substance which could continue to exhibit the qualities of that substance. What, then, could be surer to produce something utterly different than the breaking up of a drug's molecules? Would we not be surprised to know that even the relationship of contrariety of effects was exhibited by the drug in its original and in its dissociated states?

No, either the molecules are not broken up by extreme dilution, the electrical evidence to the contrary notwithstanding, or ions are not utterly different in their effects upon the body from the crude drugs from which they are derived. It will be well to reflect here that the only observed experience which can have been obtained in our provings of drugs which had been diluted above the point where dissociation is supposed to take place, is from use of the same in sickness.

If, therefore, there be such things as ions from hyperdilution it is to these provings and this use in disease that we must look for evidence of what ions can do to the body and how their effects are related to those of the crude drugs from which they are derived. So that, if light is to be thrown from the work done in one sphere of research upon that done in another, homœopathic experience is better able to illuminate the hypothesis of dissociation than the latter to rectify our experiences and tell us which are real and which only seeming.

From the standpoint, then, of those who have had experience with the possible ions, we must resist, I think, the proposition that they are universally beneficial to man in health, even if we allow to pass the correlative statement that our drugs are as uniformly inimical when used in their crude or but slightly attenuated state. With reference to the latter, however, we may recall that many among the master minds

of our school have found very little sick-making power in the crude or slightly diluted forms of some of our drugs at least, such as Calcarea, Silica, Lycopodium, Natrum muriaticum, while such power has been notable generated by this very process of attenuation, which is supposed to make them purely wholesome to man by molecular dissociation. With reference to Natrum muriaticum, which we use so commonly with our food, it may be useful to recall the experience of the Austrian prover, a pronounced disbeliever in the persistence of medicinal force in the 30th potency, who yet was compelled to admit that table-salt in that potency had made him really sick, and that in a way characteristic of the drug as judged by its effects in that and other potencies upon other provers.

No, we surely cannot admit that dissociation—if such there be—renders all our much attenuated medicines beneficial or even innocuous to the healthy man, and thereby invalidate a host of very useful provings.

Concerning the possibility of mixed effects from drugs whose degree of dilution had sufficed to dissociate only a part of the molecules, we are logically forced to the conclusion, it would seem, that where there are only diametrically opposed forces contending, as Dr. Gatchell would have us believe must be the case here, there could be only a net preponderance of beneficial or hurtful action, but no modification in the nature of the effects.

CONRAD WESSELHOEFT, M. D.: Dr. Gatchell's paper teems with so many positive assertions that one asked to discuss it is quite bewildered. The principle of dissociation by which molecules are split into their elementary atoms or ions, then positively and negatively electric, is said to prove, not only Hahnemann's theory of dynamization, but also to furnish the proof of the law of *similia,* as stated by Prof. E. H. S. Bailey (Transact., 1898, p. 454).

Undoubtedly much light was shed on the physical properties of matter by the discovery of the principle of dissociation; but this, instead of confirming our proposition of increased activity by dilution, seems to me somewhat to disturb it. Not but that the pathogenic power of drugs may not be increased, but an entirely new character and effect is imparted to them, of which, as yet, it is impossible to conceive the nature.

Take, for instance, the example of potassium chloride quoted by Dr. Gatchell. This, after dissociation, is no longer KCl, but consists of water having in solution ions of K and of Cl.

Now, according to all of our former accepted knowledge, potassium is a very different body from chlorine. Both united furnish a

third, potassium chloride, which is very different from each of its two components. This illustration is more convincing when we consider sodium chloride, or common salt, how widely different this is from either of its two constituents.

If we wish to get a patient under the influence of potassium chloride or of sodium chloride (Natrum muriaticum) we would not prescribe either chlorine by itself or potassium or sodium by themselves.

Another suggestion occurs to me, and that is: not to carry dissociation (dilution) beyond the molecular limit, because, when our molecule is broken up we cannot expect the same pathogenic or therapeutic effect that we ought to get from the undissociated molecule.

I do not know where molecular dissociation begins, whether in the first, second or third dilution. But the molecular and atomic constitution of matter being now conceded, we can easily calculate that the divisibility of matter, making all liberal allowances, extends as far as the 24th decimal, or the 12th centesimal dilution. This means, in simple figures, that a grain or drop of medicine is capable of being represented by its molecules or atoms in a volume of vehicle equal to fifteen thousand cubic English miles. This ought to, but does not, seem to satisfy the ardor of an enthusiastic dilutionist. And here comes a new proposition to puzzle us, and giving rise to the question: Does a substance by dissociation change its pathogenic character? It should do so if the dissociation theory is true, as I have no doubt it is.

What should be our attitude in regard to the matter? It appears very evident that we should discover the limit at which dissociation begins with regard to every medicinal substance we make use of; and then we should be very careful not to go too far beyond it.

But what shall we think when we apply ionic dissociation to tinctures of organic substances, by far in the majority in our materia medica?

We might accept the proposition with regard to binary compounds like the chlorides of potassium or sodium, but when it comes to the exceedingly complex condition of organic substances, all calculation ceases, supposing it to have been possible before; and rather than enlightening us and supporting the process of advanced potentiation, it appears to me to militate strongly against it.

Belladonna dissociated in regard to all of its organic components can no longer be belladonna; the same in the case of nux vomica, the same in the case of bryonia and of rhus, and so on through the whole list.

In the instance of these substances, for instance that of belladonna, are its negative and positive ions still belladonna, or something else?

Theoretically, they must be something as widely different from the original as chlorine and sodium are from common salt.

I would not extend these reflections any farther; if wrong, then any authority in molecular science may set me right. It is to a certain extent a transcendental subject, concerning which the reflections of one are as valuable as those of another. For the present, my inclination would be to remain on the safe side and not to allow myself to be carried too far into the realms of transcendentalism. By this I mean the attempts to explain the ultimate nature of a cure or even of a pathogenic effect. Whether the positive or negative ion "stimulates" the cell nucleus, or whatever its influence may be, we may say for the present, fairly and openly, that we do not know.

ELDRIDGE C. PRICE, M. D.: I enjoyed this paper very much indeed, and I am impressed with the idea of the misfortune it has been to the profession that Hahnemann was not equipped with all the modern methods of science we now have, for I believe he would have solved very many of its questions. Now, he carried the line of thought in the special work in which he was engaged further than many have gone, even at the present time. Take Dudgeon's lectures, and you find in that book a host of individuals noted who had all kinds of theories of drug-action, primary, secondary, and so on. I do not mean to say by any means that Hahnemann was particularly clear himself on the subject of drug-action in his time, as he at one time did not believe in primary and secondary effect, and then alternating effect, and another time does not seem to know about it. That is where we stand now. This is quite a radical paper of Dr. Gatchell's, and, following the line, I presume, suggested at the Omaha meeting when we were also interested in Professor Bailey's paper; and the question occurred to me, if a drug is diluted so that its molecules are dissociated, and the ions are evolved, what is going to be the effect of the solution on the human organism in which only a part of those molecules are dissociated in which there is some of the crude drug left, and in which there are some of the ions? Will we get as an early effect of that drug, a primary effect, or a combination of symptoms, characteristic of what? Now, it seems to me the question should be reduced down to something practical, a practical foundation for the proving of drugs; we must be able to recognize whether or not we have primary or secondary effects, and which are produced by the crude drug: that is, which set may be considered primary effects, and which secondary effects, and how you are going to differentiate those primary and secondary effects. Then we must be able to tell, and Dr. Gatchell may have gone that far, at which point in drug dilution we get rid of all these molecules, and have

the ions all dissociated, see that the solution represents the ions entirely. When we have done that, the preparation can be proved, and we can take the results with some degree of intelligence, and interpret the expressions of the organism in an intelligent way. Until that is done, we cannot do it. It seems to me we would be almost as much in the dark as to whether the first effect of the drug is the primary effect of the ion or the molecule, or whether there is such a thing. I fully believe there is a primary and a secondary action of the drug. Take almost any of our pronounced drugs about which we know much, and we certainly get both effects. Take opium, for instance, or digitalis. We certainly get a condition first which is opposite in its character, in its pathologic tendencies, if you choose to use the expression; the secondary effect is opposite that of the first effect, or the after-effect.

As soon as this thing is reduced down to something practical, then I think we can have provings that really amount to something; provings that can be separated, their primary from their secondary effects; but it must be reduced down to that basis. I hope, in concluding, however, that Dr. Gatchell will be able to throw some light on that point.

A. E. AUSTIN, M. D.: In the city of New York we have been proving drugs all winter. Dr. Hagenbeck proved ichthyol, with a number of persons. I think you will agree with me that we have found that the greatest results that we have received have been in the high potencies. When you take a substance and divide it up into many parts, you set a number of unsatisfied bonds free; therefore they must take up something. We know, in physics, that like bodies repel, unlike attract. So may it not be when we find the indicated remedy, finding the like disease in the body, meeting it with the medicine it repels it?

Now, if you take water, you have the hydrogen and the oxygen. If you distil it you drive out the salts and minerals, and then you have a form dissolved. Why? Because these have been set free, and they are ready to take up the wastes in the body and carry them off. And so I believe that as you break up a substance you naturally must increase its force, as hundreds of particles become free and are ready to take something up. We find all through nature this activity.

CH. GATCHELL, M. D.: I will first say that Dr. Walter, in stating that Hahnemann taught that disease is a "something," is mistaken. Hahnemann distinctly did *not* teach that disease is a "something." In the course of my paper are these words: "Hahnemann shared the views of Borden, Reil and Erasmus Darwin, who looked upon disease as being a disturber of the 'vital force,' or, as he called it, the 'spirit-like *dynamis*.'" You will find these words in Wesselhoeft's translation of the Organon, Section 12.

Dr. Tompkins' remarks were very much to the point, and the essayist highly appreciated them. The dilution of a drug I look upon as being a stimulant to function, or in the nature of a stimulant to function, within the healthy body. It must be so. If belladonna is a prophylactic in scarlatina, or if any drug, as a medicine, is a prophylactic in any disease, then it seems to me that all medicinal substances must act as stimulants, or act to increase functional activity, in order to act as a prophylactic.

Dr. Wesselhoeft has trained his guns upon the weakest part of my paper, and said not one word about the strongest point that I have made. My strongest point is the attempted explanation of Hahnemann's theory of *dynamis*. My discussion of the mode of action of the drug Dr. Wesselhoeft characterizes as being 'transcendental." In this my critic is in error. It is *not* transcendental. It is offered as an hypothesis, and only an hypothesis. But that which is hypothetical is not necessarily transcendental, and cannot justly be so called. The part of my paper that my critic has avoided discussing is the part which deals with Hahnemann's theory of dynamization; this is something which, I think, would not be so easily disposed of.

Dr. Price's remarks were very much to the point and very practical. In reply to one question, I can say that it is possible to determine when there cease to be molecules in the solution, and when all the molecules have become dissociated into ions. The degree of electric conductivity of the solution determines this. I join with Dr. Price in expressing the trust that it would be well if, in the future, provings were undertaken in accordance with this, and if the degree of dissociation were determined of all drugs or medicinal preparations which are used in making provings. That is a very practical suggestion. That is all, Mr. Chairman.

HOMŒOPATHY AND EHRLICH'S HYPOTHESIS

ALFRED DRURY, A. M., M. D.
PATERSON, N. J.

Similia Similibus Curentur is, we believe, a law of Nature. Results in thousands of cases combine to establish this contention. We observe the law of similars because we accept the evidence of our reason and the confirmation of our senses. But how the drug homœopathically administered acts upon the economy and the method by which it exerts its healing properties, is still a matter of surmise. Many conjectures have been advanced from time to time to explain the phenomena, but none seems to be entirely satisfactory. A theory which is based upon an hypothesis now generally accepted by scientists, should not, therefore, be without interest. And, if it encourage any to believe that the principle of homœopathy is indeed a law of science, the time devoted to its consideration will not be ill spent.

Theories form the basis of all existing laws of science. The experimenter, noting that definite results always follow the same causes, formulates an hypothesis which explains this action. If the hypothesis hold true in all cases, it comes to be known as a law. Such is the law of Avogadro in chemistry or that of Newton in physics.

The theory which will be considered at this time, is based upon the "side-chain" hypothesis of Ehrlich. My attention was directed to its bearing upon homœopathy, by an article of T. Mitchell Prudden, M. D., in the *Medical Record* of February 14, 1903.

He said there: "We conceive of the cell as a mechanism for the storage of energy derived from without, and for its release under definite conditions. The details of this metabolism still elude the keenest scrutiny of the chemist. But Ehrlich seeks to explain the cell's performance in general terms. The cell consists of a central group of very complex molecular combinations which maintains the characteristics and special capacities of the cell as an organism during all its existence. Associated with this central organic group are many and varied subsidiary atom complexes, which, by means of their unsatisfied affinities, bring the central group into relationship with nutritious or toxic material. These unsatisfied affinities, by which assimilable material is fixed or united to the cell, are called side-chains, or *receptors*. The cell is capable of selecting or fixing out of the host of various substances with which it comes in contact, just those and only those to which its receptors bear a definite chemical relationship." Such is a brief summary of the hypothesis as given by Dr. Prudden. It follows, then, that when a drug is taken into the system, if it have

any effect, it will be because it has entered into chemical combination with a suitable receptor of the cell. If it does so combine it has an effect upon the special functions of the cell, and the resultant derangement of the normal action manifests itself by general symptoms. Thus, although we cannot always discover what special changes take place in the cell, we are able to note what symptoms the drug produces, and we find that certain "characteristic" ones will always result from the action of the same drug. We know, then, that this drug has the power to combine with receptors of a particular group of cells, and from its action upon the cells will always cause definite results to manifest themselves. These results are called the pathogenic symptoms of the drug. Minor symptoms may vary in different individuals, but the same characteristic ones will appear in all cases.

Now, biologists tell us that when a cell is damaged, it immediately begins to regenerate its lost parts. If the pathogenic action be too strong it destroys the cell, but if the action be mild, it merely serves to stimulate the cell to an increased activity which will restore the loss and repel the invading force. Nutritious material will keep the cell in a state of normal activity, enabling it to perform its functions; and, when in perfect health, to resist all noxious influences. For the receptors appropriate not only the food necessary for the nutrition of the cell, but also materials which may be formed by the cell into varieties of substances that will protect it against harmful agencies. Among the substances which the cell elaborates for its protection, are those known as "anti-bodies." They are atom-complexes which float in the blood and combine with the unsatisfied affinities of the toxins, thus making them innocuous. These constitute an important part of the natural protective force that all living things possess.

Bearing these points in mind, let us now consider how this theory will help us in our treatment of the sick. A patient presents a group of symptoms. Evidently there must be something wrong with particular cells somewhere, and these symptoms have resulted. Ehrlich's hypothesis assumes that a toxic substance has entered the body, found receptors with available affinities, and by chemical action has joined itself to these receptors and so affected the cells. The particular cells attacked may be ascertained from a knowledge of pathology, morphology and the physical signs presented. Or, if *all* the symptoms be studied with sufficient minuteness, we may correctly diagnose from these alone, what cells are probably affected. How may these cells be treated so that they will resist the toxin? This is what we physicians should know in order to most benefit the patient.

The theory of anti-toxin deserves attention. According to Ehr-

lich, the cells being acted upon by the toxic substance proceed to regenerate action and manufacture more receptors. Weigert has emphasized the fact that the regenerative impulse is apt to exceed the actual requirements. So the receptors, some of which are occupied by the toxins, are manufactured in excess of the demand, and many of them are thrown entirely off from the cell and float free in the blood. The blood, then, containing large numbers of these free receptors that have an affinity for particular toxins, becomes an anti-toxic fluid. For the toxins form a chemical union with the floating receptors, and thus having their affinities satisfied, become innocuous and pass harmless through the system. This anti-toxic serum may be transferred to another individual and combat the disease there. So the receptor which attached to the cell was an element of vulnerability, when floating free in the seurm becomes an anti-toxin and a protection. In this manner the toxin neutralizes the effects which it, itself, causes. (This is isopathy, the first cousin to homœopathy.) The method has, however, some disadvantages. On account of the necessary innoculation there is always danger of wound infection and sepsis. The serum may contain other ingredients beside the anti-toxic ones, and these may work mischief. The anti-toxin is a specific against one disease alone and less, it is potent against the affinity of but one group of receptors. These drawbacks, however, are not enough to militate against its use could we find nothing better.

Let us now consider homœopathy in the light of this hypothesis. From our drug-provings upon the healthy, we have obtained the pathogenic symptoms of a number of drugs. That is, we have found what drugs have a specific action upon particular cells. When a sick person presents a group of symptoms we have evidence of the presence of moribific agency that is damaging particular cells by combining with their available receptors. We shall cure this sick person if we can stimulate the affected cells to regenerative action or set up in those attacked or threatened, the natural protective forces of the healthy body. Either of these procedures will overcome the effect of the poison. So the correct remedy is the one that will act upon this particular group of cells. We may then with confidence choose a drug which has produced a similar group of symptoms upon a healthy individual. For this remedy will have a chemical affinity for the unsatisfied receptors of the identical cells which are attacked by the toxins and will combine with them.*

*It is probable that the drug combines with the cell through a different set of receptors than those which have an affinity for the toxin. For the drug is not the same as the toxin. And the union will be more certain if made through unoccupied receptors, than if attempted through those already chemically satisfied by the toxins. We claim that a remedy *similar* in effects to the toxin should be used to combat it, not more of the *same* poison.

A small amount of this homœopathic remedy will be sufficient to stimulate the cells to regenerative action, spur them to the manufacture of the anti-bodies which render the toxin harmless, and set up in them the normal protective forces which will resist and overcome the morbific agencies. For, chemically, there exists an affinity between the drug and the cell receptor, and physiologically a diseased cell is very susceptible to influences of any kind. As a single cell is very tiny, and as the remedy given will affect single cells, a small quantity will usually suffice to do the curative work and will not damage the disease-weakened cell. If we could always choose the exact remedy, an infinitesimal amount would be sufficient every time.

By this theory we may understand why some individuals are immune to certain diseases and drugs. The toxin may enter the system, but if it possess no affinity for the cell receptors, or the suitable receptors be preoccupied, or there be present floating receptors or anti-bodies with affinities for the toxin, the poison will be unable to act upon the cells and will be powerless. A medicine chosen with precision will combine with a particular group of cells which may be threatened and cause the cells to manufacture the anti-bodies which will protect them. Our homœopathic drugs are ideal prophylactics because of this action upon specific cells. On account of the minimum quantity necessary to set up the action, there need be no cause for the dangerous after-effects which so frequently follow the administration of other preventives.

These are a few of the methods of action which Ehrlich's hypothesis seems to satisfactorily explain. It would doubtless give the reasons for other remarkable effects that follow treatment by the indicated remedy.

In conclusion we may briefly sum as follows:

A cell will combine with those substances and only those for which its receptors have a chemical affinity. It uses the food with which it combines for nutrition and for the formation of anti-bodies which disarm the toxins by uniting with them. If a cell be damaged by a mild force it will at once start to regenerate the injured parts.

Toxins cause certain symptoms because they attack particular cells through an affinity for the receptors of these cells.

Drugs produce certain symptoms because they combine with particular cells.

Therefore, when a group of symptoms proclaims that particular cells are attacked, a drug which has produced similar symptoms will have an affinity for the receptors of the affected cells and if given in small amount will stimulate them to exercise their normal protective

and regenerative force and so exterminate the trouble at its center.

This theory gives a simple reason for the truth of the dictum of Hahnemann, that a drug given according to the law that similars should be cured by similars, "will obliterate the disease in its entire extent in the shortest, safest and most reliable manner."

DISCUSSION

CHARLES MOHR: I think the writer of the paper hit the nail on the head when he said that the dilute drug will cure a common disease or a patient suffering from a common disease, providing the principle of *similars* is taken into consideration. The chairman of this bureau, in his opening remarks, depreciated the fact that the homœopathic colleges are not growing as they should. He also deprecated the fact that in the profession of medicine there is not the concord, as far as theory and practice are concerned, that should exist, and referred to the fact that the laity are far more in sympathy with the homœopathic methods of practice than it appears the professors are. I think I am stating this correctly, Mr. President. I believe that while these are facts, it arises largely from the sort of papers that we have been listening to this morning. I have enjoyed Dr. Gatchell's paper; I have enjoyed the paper of the later essayist; and while I appreciate them, I feel that they engender in the minds of the doctors or beginners in homœopathy, a question as to the efficacy of the homœopathic medicine administered according to the principles of Hahnemann. Why? Because we are attempting to demonstrate the *modus operandi* of a cure. Every homœopathic philosopher has attempted that. Hahnemann attempted it. Crauvogle attempted it. Hering attempted it. All our authorities attempted it in years gone by, and every one of them has confessed that the *modus operandi* of the cure is not known, and question whether it ever will be known. You make attempts at it. You may satisfy some scientific questions which have arisen, but I believe we cannot come to an ultimate determination of the *modus operandi* of the cure; therefore we had better devote all of our energies to the proving of drugs, to a belief in the activity of the dilutions, and practice homœopathy under our law and rules of practice.

CHARLES B. GILBERT, M. D.: If the remarks of Dr. Mohr had been carried out in times past, by the professors in our colleges, we would not have necessity for papers like this. Hahnemann says theories are of no consequence. He has more confidence in his experience than in his intelligence; and if the homœopathic physicians would have more confidence in their experience and bother less with their intelligence

they would be better homœopaths and we should not have an essayist standing up and saying that *similia similibus curentur* is the *law*.. It is nothing but a *rule,* and it is of no value whatever when it comes to the practice of homœopathy except as it may be applied to the selection of the remedy.

The action, as Dr. Mohr already said, we know nothing about. If we should know it, we would be equal to the Almighty, and until we arrive at that state of exaltation which will enable us to dictate to the world and arrange its affairs, we never shall know it. It is not necessary for us to know it. All that we need to know is that when we give a remedy according to *similia,* it cures. It is not necessary to bother ourselves how it cures. We never can know.

There is no homœopathy in anti-toxin at all. We are not treating diseases. The allopaths treat diseases, and the allopaths themselves say it is quantity, not quality. You inject a horse with diphtheritic poison but it does not kill him. Why? Because there is something in the chemistry of his body which prevents the action of that toxine in his blood; therefore you take a quantity of preventive and inject it into a person who has diphtheria and it will antidote that poison if you get enough of it; but it is quantity; there is nothing homœopathic about it. It is that very thing, running after these fads, which leads to the criticism that the chairman has made here of the teachings and the practice which is reducing homœopathy down to a rule, instead of a law.

CHARLES GATCHELL, M. D.: Mr. Chairman, there have been many expressions of belief here. If I am not encroaching upon the essayist's function, I would express a belief: and that is, that as Hahnemann was a leading scientist of his day in all departments of science, so today he would be one of the foremost, and he would be in accord with the science of the twentieth century, and not of the eighteenth! And if Ehrlich, and Behring and Welch, and others, are today the leading scientists, so Hahnemann would be today, not with Erasmus Darwin, but he would be abreast with Ehrlich and Welch and Behring. In his Herschel lecture delivered in England last winter, Dr. Welch, of Johns Hopkins, than whom there is no higher scientific authority today in his special department, used these words: "The essence of Ehrlich's theory which has been so ably discussed in the paper is thus tersely expressed by Behring." Here is Welch giving you the words of Behring: "The same substance which, when in the cells of the living body, is the pre-requisite condition for an intoxication, becomes the means of cure when it exists in the circulating blood. If we cannot accept such teachings as that, when men like Welch and Behring are ex-

pressing, in other words, *similia similibus curantur,* and if we are to be talked down for doing so, then this is not the American Institute of Homœopathy.

If our school is suffering from anything today, it is suffering from the want of progressiveness on the part of those among its members who decry every discovery in the collateral branches of medical science.

CHARLES MOHR, M. D.: I am afraid that Dr. Gatchell misunderstood me entirely when I arose to say what I did. I had not the least intention of talking him down, nor his paper down, nor the paper of the Doctor before me. I simply expressed the opinion that we ought to stick to our principles and practice them and not spend too much time in an attempt to explain the *modus operandi* of a cure. I stated when I began my remarks, that I enjoyed Dr. Gatchell's paper, that I enjoyed the paper I have last heard, because they simply confirm the fact that the present-day scientists on the potency question are very much of the same mind as Hahnemann. I have not the least intention of talking down these papers, and I want it so understood.

ALFRED DRURY, M. D.: I will merely say in closing, that I had no idea of saying anything that would disprove the practice of homœopathy. In fact, I think I opened my paper with the words that we believe it to be a law of Nature; or, if you like, a rule of practice. I do not question this law, I only attempt to find some reason for its truth. This is an age of scepticism and materialism. It is an age when people are demanding the reason for things; and I fail to see why, because we know we have a rule of practice that produces results, we should hesitate to seek for an explanation of these results. This paper is merely an attempt to find some reason for the results which our homœopathic drugs give, when they act upon disease. I was led to write it by the remark of a chemist who is a professor in one of the prominent universities. He said, "We can see a reason for the action of a drug given according to the allopathic theory. What reason can you give?" I told him that the drugs did the work, and that was sufficient reason; but this did not satisfy him. Consequently, I wrote this paper as an attempt to satisfy those who wanted some scientific theory. That is all I have to say, Mr. Chairman.

SYMPTOMS, THE BASIS OF INDIVIDUALIZATION

PEMBERTON DUDLEY, M. D.
PHILADELPHIA

If the assumed therapeutic power of the similar remedy is a reality —and some of us actually believe it is—if it be a fact of nature, it must be in harmonious relation with other facts, and especially with those upon which it directly or indirectly depends. It must be borne in mind that no single fact or phenomenon of nature stands dissociated from all others, but that each depends for its occurrence or continuance upon a number of others with which it is, therefore, more or less intimately associated. As a consequence of forgetfulness of this relation, other schools of medicine, as well as ours, have been led into erroneous theories and unskillful practice, and the forward movement of medicine as a science has been seriously retarded. This imperfection in our homœopathic knowledge; this assumption that the simple formula "similia similibus curentur" expresses all there is in the homœopathic art, has misled some of the best of our champions into very serious mistakes in their teachings and practice, and is deluding many others into a belief in the half-truths of so-called "modern medicine," with its ever-changing therapeutics based upon ever-changing pathological notions and conceptions.

What is the energy of a drug? What the energy that constitutes it a drug, and not a mere physical instrument or a mere chemical reagent? What is this *dynamis* that never yet has manifested its power anywhere in the whole realm of nature, save only upon the vital functions of living bodies? It is useless to attempt an answer, but we know sufficiently well that this energy operates under laws that are altogether unknown to general art, and is governed by principles to which the student of general science is a stranger. When we attempt to apply the rules that govern the operations of chemistry or of some department of general physics, to our employment of the homœopathic remedy, we only betray our utter ignorance of the great underlying truths of homœopathy.

A correct conception of the therapeutic doctrine of similia, impresses one with the idea of the *locality* involved in the drug action, of the *organ* or *tissue* invaded, and of the *function* or *activity* modified by it. It thus appears that homœopathy takes cognizance of the anatomy and physiology of the organism, as well as of its pathology, its diagnostics, and its therapeutics. It also appears that the student, engaged in the study of the dry skeleton, is beginning to climb that

wondrous tree of knowledge whose topmost bough, whose blossoming and fruitage will be "the selection of the similimum" and "the homœopathic cure." The fathers of the American Institute of Homœopathy, back in the eighteen-forties, had a scientific reason, as well as a partisan impulse, when they insisted that homœopathic students should be taught by homœopathic physicians, and by no others, or else they builded better than they knew. That medical college is best equipped for its work, in which every teacher, from the anatomist up to the clinical therapeutist, is a discerning, homœopathic enthusiast. And any professor in a homœopathic college who is not conscious of being such, may well ask himself whether he is altogether fitted for his responsible office.

We now have, as the basis of our thought, the fact that drug power is under the control of laws not known in other departments of inquiry, and that, consequently, we cannot say that the principles by which we predicate results in physical or chemical operations, will apply in relation to drug phenomena. We are shut up to the necessity of judging drug action *by* drug action.

But we must go a step beyond this point. We have no basis on which to assert that the therapeutic action of a drug is governed by all the modifying influences which affect its pathogenetic activity, and are therefore left to the only recourse of judging therapeutic action by therapeutic action.

Hahnemann, starting from this point, teaches that our knowledge of drug action, both pathogenetic and restorative, can be known only by its effects (symptoms). He also tells us that all we can positively know of disease is by the investigation of its symptoms. This hundred-year-old truth stands as firmly today as when it was uttered, and though it is applied in therapeutics by but a small minority of the medical profession; yet the physician who should attempt to deny it today would be fool-hardy indeed.

If now we accept the therapeutic doctrine of similars, it would seem that nothing more need be said of the necessity for individualization, as a pre-requisite to a homœopathic prescription; and yet this proposition is not accepted by the vast majority of physicians as possessing any particular significance in their search for the curative, or alleviative, remedy.

One of the strongest tendencies of the scientific mind is toward generalization. This search for principles, this delving for laws, is, says Argyll, "the great quest of science, and the finding of them is one of her great rewards. Such discoveries yield to the human mind a peculiar delight, from the satisfaction they afford to those special

faculties whose function it is to recognize the beauty of numerical relations. The satisfaction is so great, and in its own measure is so complete, that the mind reposes on it as on an ultimate truth." In the practice of medicine, this tendency is particularly strong, and it is to this trend of mental activity very largely that physiologic and pathologic theories may attribute their origin, and on which the multitude of therapeutic creeds and systems of the past and present have taken their rise. Indeed, the author of this paper is of the opinion that physicians of all schools of medicine prefer generalization to individualization because they like it, and not because of any real benefit to be gained by it in therapeutic art. Hahnemann has taught us very explicitly that the only things we really *know* of a case of sickness is through its manifestations or symptoms. And the experience of the profession from time immemorial is, that so soon as we forsake the solid ground of real knowledge and enter upon the realm of hypothesis, we begin to be misled by some jack-o-lantern or other. About all the therapeutic theories originating in the last century are already dead, with the exception of two or three that have come up within twenty-five years, and these are showing the modifying influences of time, that are so surely the precursors of disintegration. The germ theory (as it has influenced therapeutics), the theory of sepsis (so far as it is a theory, and not a demonstrable fact), the evanescent use of lauded medicines for typical ills, etc., are striking examples illustrative of the perishable nature of therapeutic "generalizations." So long as to generalize means to theorize, so long will the Hahnemannian injunction to *individualize* constitute the inspiration of all our most thoughtful and successful physicians.

If there is a "law of cure," then all cures which come under its operation are effected by a power not under human control. If we would apply that power successfully, we must obey the laws under which its operation is carried on. Our own puny notions will not avail us. The operation of natural force is exact, and the law that governs that force is exacting. It is universally known that not all cases of disease of the same name can be cured or alleviated by one and the same drug. This truth is practically recognized by everybody except the proprietary quack and his dupes. Even those cases of disease that we designate as "typical," are not absolutely uniform, but only relatively so. And we learn, to our discomfiture, that they are not amenable to one and the same remedial agent whenever we undertake to treat them with it.

But, of course, no physician, trained in the wisdom of the schools, ever thinks of treating disease "by name." No; we endeavor to ascer-

tain the *conditions,* or the *processes*—the *pathological states,* or the *modified functions*—and we aim our treatment to bring about the restoration of these abnormalities. Yes, that is very true—of some of us. But even here we find that uniformity of result does not follow uniformity of treatment. Experience, even here, compels us to individualize; that is, if we have learned how to do it.

It seems that whether we are practicing some sort of homœopathy, or some sort of antipathy, or allopathy, we come to the conclusion, sooner or later, that therapeutic uniformity is possible only as that uniformity springs out of our necessary obedience to law. True, all physicians may, in managing a case of typhoid fever, turn aside from his main line of treatment to suppress a diarrhœa with an astringent, or some one of the dozen forms of restlessness with an opiate; but such a procedure is not individualization, and moreover it is never curative of anything whatever.

It is a fact, then, that cases which follow quite closely some typical form of pathological manifestation, cannot always be successfully treated by the same method or cured with the same drug. The necessity of some form of individualization seems to be tacitly and practically conceded by representatives of all schools of practice, and by well nigh all physicians. The trouble is that members of the profession do not follow any uniform rule with reference to it. For instance, the average "old school" practitioner always treats his cases of intermittent fever with quinine as a first resort. Never does he think of any other remedy until his futile experiment has demonstrated the necessity of using another. So with the treatment of typical rheumatic fever. One physician invariably resorts first to the salicylates; another to colchicum or its derivatives; another to rhus, etc., and resort to some other and better indicated remedy, only on compulsion. The writer has reason to believe that certain homœopathic physicians begin their treatment of rheumatism with bryonia, and only abandon it when failure forces them to do so. Such practice is not scientific, and, unfortunately, it is not brilliantly successful.

The writer does not believe it possible to adopt any successful method of individualizing cases for treatment, except upon the basis of symptoms. A mere study of types, or of morbid conditions, or of abnormal processes, or even of originating causes, can never guide the physician to that nicer and more delicate discrimination which is essential to the highest success and skill in medical prescribing.

This brief and important essay should, at least, close with a concise statement of some of the propositions on which the question turns:

1. The final determination and choice of the remedy from among

those more or less indicated is an art requiring exactitude and delicacy of discrimination.

2. The differentiation of remedies is an art in which absolute and exact knowledge of their properties is essential.

3. The differentiation of remedies necessitates also an exact knowledge of those indications upon which the differentiation is based.

4. In harmony with the teaching of Hahnemann, and in full accord with modern experience, the only exact knowledge of a drug or of a case of disease is based upon actual observation of symptoms.

5. Therefore, observed symptoms constitute the only reliable basis for the individualization of cases with a view to their curative treatment.

DISCUSSION

ROBERT WALTER, M. D.: I believe no one acquainted with the writings of Hahnemann can doubt that his theory of disease was that it is a vital process, and individualization is the underlying basis of his whole system. I am a believer in Hahnemann's law. I am very much of the opinion that it has a larger application than even the homœopathic profession believes. It applies to every act, habit, indulgence, to every influence or agency that can affect a human body. Hahnemann restricted its use to the effects of drugs in the *treatment of invalids,* I believe, rather than the *treatment of disease.* For the question has been suggested, What do you cure, if you do not cure the disease? I hold that that action of a drug is the action of the living thing which can think and act; and not the action of a dead thing, which has no power of thought and no power of action. The action is always the action of the vital system, and not the action of the drug. The drug is the *occasion* of the action. The vital, intelligent bioplasts or protoplasts recognize the presence of the drug, and proceed at once to act in accordance with its conception of the character of the drug. The drug should be administered only in accordance with the law of similars.

The only one thing that I wish to emphasize also is that it would be of immense consequence to the homœopathic profession if the nature of disease was thoroughly understood; and *how the medicines cure the disease* were equally understood. If these two fundamental problems of all medical science could be settled once for all, we would have scientific system of cure and these discussions would be unnecessary. What is needed is the fundamental law which will explain these problems.

J. B. GREGG CUSTIS, M. D.: The former speaker praised Dr. Price's remarks because he said something practical must grow out of either

the paper under discussion, or out of the discussion itself. We are all here for that purpose. Unless something practical is brought out of the papers that we hear read our work is in vain.

Our Chairman tells us that the object of this Bureau can only be accomplished through the teachers in our colleges, that they should be told what the students want, and what is demanded from them by the profession at large.

The essayist tells us that the ideal method of prescribing, the method which is characteristic of the Homœopathic School is individualization.

Individualization of patients originated in the School of Homœopathy, and should be taught in our colleges as the strongest characteristic of our method. Individualization is an absolute necessity for a good prescription, yet our essayist, in his conclusion, makes it seem almost impossible to the student or beginner to reach the desired end. He does not mean to discourage the student or the practitioner, for there is nothing difficult in the task. Whenever a first-rate prescription is made the prescriber has individualized the case, or under our law the cure would not result. Whenever we have prescribed successfully we have covered the totality of the symptoms; and yet there are more poor homœopaths made because of the continual cry which we hear from some quarters that we must cover the totality of symptoms than for any other reason.

It is only for the advanced student or experienced homœopathist to be able to tell after a consultation that he has covered the totality of symptoms; it is only allowed to him to meet the standard prescribed by Dr. Dudley. What our colleges need is some method of teaching by which the students during their course, or during their first year of practice, can bring about practical results which will arouse their ambition, and will lead them to such further study that they may reach within a reasonable time the Doctor's ideal.

The Doctor states that we must not look upon the cause of the disease as sufficient. But we do know, when we have covered the cause of the disease in our prescriptions, even when we only have Bœnninghausen's say-so, that a certain remedy will cure the results of the cause named. When these key-notes are used, our prescriptions are successful—as successful as if the existing cause were removed surgically. We know that, because a cure has resulted from a remedy prescribed by reason of the known cause, the case has been individualized and that the totality of the symptoms has been covered. Will any one say that the physician who has prescribed petroleum for the result of eating cabbage, and whose patient has promptly recovered

after the administration of the remedy, has not properly individualized the case, or even that he has not covered the totality of the symptoms? Let him who thus makes the prescription on the indication then take his materia medica and he will find that the remedy has covered the totality of symptoms. Let the advanced student talk about the cause of disease, talk about action of remedies, and tell the student that the individualization of the patient is the peculiarity of the homœopathic method, and that in every homœopathic prescription the totality of symptoms must be covered, but let him also tell the practical method by which he reaches the remedy, and do not drive students away from the school, or drive those who have entered the school into the so-called specific medication, or into empirical practice.

CHARLES B. GILBERT, M. D.: I do not quite agree with Dr. Custis in regard to the cause of disease as a basis for prescription. My observation is that the practice has done more to make routine homœopaths than almost anything else. We must individualize in each case; we may not do it as well as some one else would, but the remedy will go to a certain extent; this giving one remedy for one disease by name, is just what Dr. Dudley's paper is directed against; it cannot succeed. It is not homœopathy to generalize or to speculate. I agree with Dr. Dudley. That paper is one of the best I have heard before this Institute and it is sound, except his *curentur*.

ELDRIDGE C. PRICE, M. D.: There is only one word I want to say on one point, and it is, that the professor must certainly be an enthusiast. That is primarily true. In fact, any man must be an enthusiast in any line of work, if he expects to make a success of it. But the professor must be an *intelligent* enthusiast. As far as he can, he must have in mind the "totality" of the symptoms, and he must know what that means. It means *two* totalities: first, the pathogenetic totality, and second, the pathological totality. (Applause.) I do not believe everyone recognizes that fact when prescribing. I further believe that neither Hahnemann nor any living man ever intelligently covered the totality. That is my firm belief. In the first place, do we know the field so thoroughly, beginning with the bones and coming to the skin, that we can in any disease condition thoroughly cover that totality from the foundation, from the centre to the periphery? And has a drug ever been proven so that we understand the effects of that drug so thoroughly as that? Why is there a constant cry for re-proving drugs, if such is the case?

Another point, which was brought out by Dr. Walter, is, that drugs do not act. The apparent action of drugs is really the effort of the organism to expel, destroy, dispose of, or in some way protect itself

against the intruder, the drug. So-called primary action is evidenced in the organism making this effort, and so-called secondary action is evidenced by the organism in relaxation, resting after its primary effort. If we bear this idea in mind it will throw a flood of light upon pathogenesy and upon our therapeutics.

CHARLES MOHR, M. D.: I want to commend Dr. Dudley's paper very heartily. I think he knows I am in real sympathy with the sentiments expressed in the paper. Hahnemann's totality of the symptoms means everything that is actually present. He takes into consideration all of the symptoms, and at the same time tries to discover their cause. I believe, Mr. President, the young practitioner makes a mistake in misinterpreting Hahnemann's own words; when he refers to symptoms he does not mean the subjective symptoms only, but takes into consideration the subjective phenomena and everything else that can be discovered by means of physical signs or appreciated by our senses. I am sorry to say that in some schools they do not teach this meaning at all. If the Organon is studied at all carefully, you will find Hahnemann states positively the necessity for physical examination. The cause of the disease is to be removed whenever discoverable, and if medicine is required the remedy that covers the subjective and the objective symptoms should be employed.

G. P. WARING, M. D.: Individualization brings out very plainly the question as to the value of symptoms. Not necessarily all the symptoms, and then try to find them in the pathogenesy of some drug. It is a question of taking the value of the symptoms. The symptoms that are found in the diseased parts manifesting themselves in the tissues, are not of any great value, if you want to individualize your case. The symptoms that are of the greatest value in individualizing are those that we say belong to the patient, belong to the man, not his organism; belong to the internals, not the externals; belong to the creative principle in the body, not to that which is created; consequently the moral and mental symptoms are those that are of the greatest value. This question of individualizing, then, involves the understanding of those higher symptoms which belong nearer and closer to the center of the life itself which must flow from the center to the circumference, from within out. And in our individualizing we must take into consideration this thought, as expressed in Doctor Boericke's "Principles of Homœopathy." It has always stuck to me. "The symptoms of the most value in the selection of a remedy are of the least value in the diagnosis, hence, the symptoms of the least value in the selection of the remedy are those of the greatest value in the diagnosis of the case." Consequently in this question of individualiza-

tion, let us look to the moral and the mental symptoms, and also that which makes the patient better and worse, or the desires and aversions of the patient. A prescription based upon such a study cannot fall far short of the similimum.

E. B. NASH, M. D.: I want to call attention to one or two points that seem to me to be important. Dr. Raue said, and I believe he never said a truer thing, that those symptoms which were necessary in the selection of a remedy often lay outside entirely of those that went to make up the pathology of the case; and he he said this in connection with the treatment of organic diseases of the heart. This has been said here, and we sometimes quarrel over it when there is no occasion to quarrel. Treat the case from the symptomatological standpoint. I say there is no occasion to quarrel over these things or to discuss them; that I believe that every symptom whether we understand it or not, is explainable from a pathological standpoint. We have some things to learn yet, and there are things in the explanation of these remedies that we have not yet dreamed of in our pathology and that would do us well to investigate; and I believe such papers as Dr. Gatchell's are in order and ought to be pushed to the extreme possible result of being able to explain these things. Whether we have been able to explain them yet or not or because we have not been able to explain them, is no reason why we may never be able to explain and there is no harm in investigating the subject. Every scientific subject ought to be investigated.

Again, one of the Doctors made the assertion that there never was a case in which the totality of the symptoms was covered. I believe there are many cases in which the totality of symptoms are covered, and I do not believe that a cure was ever performed by the homœopathic remedy in which the totality was not covered, but they may never have been produced in pathogenesis. I believe that if those provings are carried out we would find the totality was covered. It does not make any difference whether it is covered intelligently or not, if it is covered and cure results; further proving would show that we *had* covered the totality of the symptoms.

A MEMBER: Mr. Chairman, I do not care to enter into the discussion such as has been followed. I do just want to drop this thought.

It has been said that the professor in college ought to be an enthusiast. That is good. But back of all that he ought to be a man of character; he ought to be a man of opinions; he ought to be a man of science, a liver of truth, one who has seen a truth, a follower of it, and a man who acts upon it. Now, I believe it is not the mongrel teaching so much in our colleges today that makes the namby-pamby-

ism (if I may express it so) of the large proportion of homœopaths in this country today. I believe it is because, in the first place, many members of the faculties are not men of character and that they are not making men of character of their students. When you weave on character in the student, you will make him a scientist, a man who seeks the truth; and when you have made that you may make him a truth, a man who teaches, a man who teaches himself if nothing else; and when you have sent such men over the country you have men that are investigating. They have the benefit of all the best, of all the literature, of all the teaching and of all the thought and science; and if each man is a man of character he will build upon that fact himself, and he will impart some of it to everybody else; and when you have such a man you will crown him by these three things: faith, hope and charity; and the last one, charity, will keep us out of faction, and will keep us pursuing the one object in medical life: that of doing the greatest possible good to the patient, whether he does it by individualization or the study of the cause of disease, or anything of this character.

The Chairman: I will call upon Dr. Dudley to close the discussion.

PEMBERTON DUDLEY, M. D.: Mr. Chairman, I want to speak a word for the College in which it was said the Organon was never seen. Some years ago, after I began teaching Institutes in a certain college, I read in a western journal an intimation that the Organon was a book not seen in that particular college and, presumably, not studied. Next morning, when the students were all gathered together, I asked them how many had copies of the Organon with them. Seventy-two books were held up. You cannot always believe what you hear about the colleges.

There is a point in my paper I wish to emphasize and illustrate in regard to the use of symptoms as a basis for individualization rather than the use of generalizations. I am called to see a case apparently indicating bryonia or rhus, and find that the muscular pains are ameliorated neither by motion nor by rest, and so re-examine the case and perhaps find that neither is indicated, but that mercury or sulphur, or something else is indicated. That is what I mean. The use of such a modality in and by itself, is generalization.

Now, as to causes, never prescribe a homœopathic remedy for the exciting cause alone. You never hit it, and never cure it. Hahnemann says: "*Remove* the cause when it is discoverable, and the patient will generally get well of himself, without further treatment."

Hahnemann tells us that it takes four things to make a good physician. One is to know his drugs; another is to know the disease;

another is to know the curative relations between drugs and disease; and another to know how to remove the obstacles that interfere with recovery. These four; and the man who knows all these is a physician. Do not let us forget that fourth thing. I am very much obliged to the gentlemen for the interest they have in this subject and the instructive consideration they have given it.

THE EXAMINATION OF THE PATIENT

THOS. G. M'CONKEY, M. D.

SAN FRANCISCO

When the Chairman assigned me this subject he placed no limitation except that of time (fifteen minutes). Coming under the bureau of homœopathy it seems fitting to compare homœopathic with so-called rational methods. The belief that the medical treatment of disease should be based upon a scientific insight into pathological processes and a corresponding scientific knowledge of the action of drugs is the creed of the scientific school. This ideal method by which the means of cure would be self evident or prescribing for the sick would be a simple computation of known quantities, is, at present, at least, unattainable. Medicine is essentially an art rather than applied science. It is true, that in the past fifty years, during which the associated medical sciences have become what they are today, an occasional suggestion for the treatment of disease has been contributed by pathology, physiology, chemistry, etc. But these suggestions have been of a hygienic nature rather than therapeutic.

In the examination of the patient in his calling as physician, it is not as the cultivator of the science of pathology, but the practiser of an art that concerns us. His previous study and knowledge of pathology will furnish him a precision and facility, indispensable to an intelligent and thorough examination in the same sense that a knowledge of physiology and anatomy is indispensable.

The purpose of the physician's examination is to furnish data for the subsequent treatment. If in the course of this examination an etiological diagnosis can be made the problem of treatment may be simple. Where there is some "manifest exciting or maintaining cause for removal every sensible physician will remove such causes at first; after which the illness will generally subside of its own accord," as Hahnemann has so concisely put it. Or the indications may be for palliative and hygienic measures. But this ideal simplicity, peculiar to no school of medicine, is attainable in a relatively small number of cases. Even in that large and constantly enlarging number of diseases, known to be due to minute forms of animal and vegetable organisms, the problem of treatment can not be simplified into "*tolle causam.*" But, as Hahnemann said, "the physician, in curing, derives assistance from the knowledge of facts concerning the most probable cause of acute disease as well as from the most significant points in the entire

history of a case of chronic disease." The organism responds to specific morbific agents by the manifestation of specific morbid symptoms. To know whether a temperature of 104 degrees is the response of the organism to an invasion of the diplococcus pneumoniæ, bacillus typhosus, bacillus tuberculosis or some other bacterium is not a mere nicety for the pathologist. The physician avails himself of this knowledge in his prognosis and hygienic management of his case. I am sure that it is helpful in a therapeutic sense also. And this without falling into the error of treating names or mere abstractions, the futility of which Hahnemann insisted upon and a realization of which is beginning to dawn upon the leaders of the dominant school. While it is true that we have to do with patients and not diseases, Trousseau was right in saying that "to know the natural progress of diseases is to know more than the half of medicine." It was the pathology of his day which was purely speculative that Hahnemann regarded so unfavorably. The experimental methods and proved facts of modern pathology and bacteriology are utilized by the homœopathic physician, but they are not the basis of his therapeutics. "The role of the physician is not exclusively to seek the infectious agent; but it ought to count with him. To speak of microbe in the place of virus or contagium is not to replace one word by another; it is to substitute positive knowledge for ignorance or whim." This is the proper and consistent attitude for the physician, of whatever school. The earlier pretentious claims of the bacteriologists who assumed that their discoveries implied a revolution in the treatment of disease has been replaced by a more modest interpretation of the role of the microbe. The soil, i. e., the patient, so far from being a negligible factor in the matter of infection and cure, has been proved by these very discoveries to be of increased importance. Bouchard, of France, has recently said: "What renders possible the development of an infective disease is not the chance meeting of man and microbe. This meeting is constant, but it is generally without result. * * * The healthy man is not attractive to the microbe. Almost constantly invaded by infectious agents, he reacts against them, and in this contest keeps generally uppermost to such a point that often the disease does not even become apparent." Something strangely like the foregoing is found in that remarkable essay of Hahnemann, "Spirit of the Homœopathic Doctrine," thus: "The first of these unmistakable laws of nature is: the susceptibility of the living organism for natural diseases is incomparably less than it is for medicines. A multitude of disease-exciting causes act daily and hourly upon us, but they are incapable of making the healthy sick; the activity of the life-sustaining power within us

usually withstands the most of them, the individual remains healthy." The new discoveries are not only not subversive, but confirmatory of the master's teaching of a century ago. The only instances I have seen of the use of the word "dynamic" as applied to the curative action of a remedy in old school literature has been in connection with serum therapy, the latest and most valuable contribution of scientific medicine to therapeutics. The man who comprehends the spirit of the homœopathic doctrine has no dread of new discoveries.

"As little as we mortals understand the economy of healthy life, and as surely as it must ever be hidden from us, * * * so impossible it will ever be for us to understand the internal processes of disturbed life in diseases. The internal process of diseases is only manifested by those observable changes, complaints and symptoms through which alone life expresses its inner disturbances, so that in every given case we must remain unable to determine which of the morbid symptoms are primary effects of the morbific agency, or which are to be considered as the reaction of vital force in its spontaneous curative efforts."

Certain it is that today many of the morbid symptoms of disease are more and more being "considered as the reaction of vital force in its spontaneous curative efforts," to borrow Hahnemann's phrase. For example, we now know inflammation to be a conservative process, "the response of living tissue to injury." Enlightened physicians are beginning to see that fever is a symptom not always to be antagonized. The pendulum seems to be swinging the other way now with the "rational" therapeutics, for we see Friedlander in Germany employing artificial fever as a therapeutic measure. He regards it as a natural process which serves the purpose of immunizing and eliminating pathological materials, like bacterial products, etc. He was able to show an increase of the leucocytes up to 25 per cent, after intense heat influences in moist media, like hot baths, steam baths, etc. At the present rate of progress in proving important symptoms to be the spontaneous efforts of the organism to cure itself the time cannot be far off until it may occur to these "rational" therapeutists that the man who has been prescribing in accordance with the law of similars has been the more "rational" of the two. This protective function residing in the organism or the *cis medicatrix naturæ* of the ancients is easily interpreted since Darwin has given us the key. To insure the continuance of the species at least three things are essential: reproduction, nutrition with growth, and power of protection from enemies. A failure in any one of these would eventuate in the annihilation of the species. As there are facts, Huxley's "ultimate

facts," in nutrition and reproduction, unexplained and inexplicable, so it is with this protective function. The facts that we know, such as phagocytosis and serum changes have the same relation to the unknowable that optics has to the function of sight. The importance of this view of the protective and curative function lies in its application. It begets a confidence in what we call nature. It acts as a wholesome corrective to the over-confident and pedantic meddling which all thoughtful men deplore. What, then, is the function of medicine in curing diseases? The ages have not been deceived in believing that medicines have some power in curing disease. Its province is to give the necessary prompting to this more or less latent protective power residing in the organism. This is what I understand by the dynamic action as opposed to the materialistic idea that it acts as a solvent or antiseptic, or what not. The function of medicine, then, aside from a possible hygienic or palliative use, being to give the necessary "stir up" to nature, it is the function of the doctor to know what particular impetus is called for. The clinical aspect of the disease is to the homœopathic physician not only the basis but is in itself the adequate guide to his therapeutic treatment. It is not necessary to theorize. In his examination of the patient he does not fix his attention on a few of the symptoms ignoring others as accidental or unimportant and by more or less specious reasoning deduce the "rational" therapeutic indications. This is the peculiar merit of homœopathy that in its practical application clinical facts and not speculative theories determine the selection of the curative remedy. There is, of course, the one broad generalization, the law of similars, that connects the clinical facts or symptoms of natural disease and drug disease. Aside from the great advantage of eliminating hypothesis, it not only permits but requires that every symptom, subjective and objective, whether of body or mind, structure or function, must be taken into account. Totality of the symptoms is an essential part of the law of similars. Drug diseases like natural diseases have many symptoms in common and the law of similars, especially the selection of the similimum, makes it imperative to individualize the disease. The characteristic symptom of a drug, i. e., those that are peculiar to it alone, are usually the seemingly less important subjective symptoms. To ignore any symptom as trivial or accidental, therefore, in the natural disease, would be to overlook, often, the very key sought. The importance of this individualization is now being insisted upon by the great teachers of medicine in the dominant school. Vierordt says, in the preface to his Medical Diagnosis: "The objective point of the physicians investigations at the bedside is, therefore, an individual

diagnosis, first, on purely scientific grounds, but still more important from the practical consideration that it must form the indispensable basis for individualizing the treatment. * * * The individual diagnosis can never be made at the study table, but only and always at the bedside, and there by a sort of artistic construction of the complete picture of the disease out of its collective phenomena, anatomical and functional." "Then a study of the whole organism, the totality of the picture of the disease." This is Hahnemannic not alone in thought, but even phraseology. It rather gains in significance, if Vierordt reached his conclusions as a result of his own investigations, as I suspect he did, for as in Jean Paul Richter's day, homœopathy is "rather shunned than investigated." These evidences of the homœopathic tendencies of modern medicine are so numerous that there is an embarrassment of riches. I will make two quotations from England, that sturdy stronghold of orthodox medicine. "For disease in its primary condition and intimate nature is in strict language dynamic; it precedes, underlies, evolves, determines, embraces, transcends and rules the anatomical state." Sir Andrew Clark before the Clinical Society of London.

The London Lancet of Feb. 24, 1900, says: "That the physician has to study not disease per se, but the diseased man, is a truth which took us some twenty-two centuries to learn, but which Aristotle knew some 350 years B. C. Until 50 or 60 years ago, disease was regarded as an entity distinct from the body, to be expelled from it by drugs, like a tapeworm, whereas we now regard it as a state affecting the entire man.'" In the Philadelphia Medical Journal of April 11, 1903, in an excellent paper on the Treatment of Croupous Pneumonia, abounding in much good, albeit unconscious, homœopathic thought, occurs this sentence: "In fact no treatment should be employed, excepting, of course, a possible specific one, that would in any way hamper the belligerent action of nature and no drug should be administered for the sole purpose of combating a mere system, as is done by the disciples of the visionary principles of Hahnemann." Perhaps the writer, Dr. Bradfute, is a conscious humorist, for to seriously charge Hahnemann and his disciples with "combating a mere symptom"—note well the phrase—as the characteristic feature of their treatment of disease, is positively humorous in its absurdity. There is no objection to his getting on the same platform with the disciples of Hahnemann, but quite naturally they object to being crowded off and assigned to a platform whose abandonment they rejoice to see, whether brought about through their own direct influence or the trend of the times. It is such misrepresentation, willful or ignorant, of homœopathy that not

only justifies the existence of this bureau but makes clear the particular work cut out for it. It is the disinterested laity that we must appeal to and teach the truths enunciated by Samuel Hahnemann, which the technico-physical 19th century has only served to confirm. The too great readiness to resort to surgery and the enormous trade in proprietary medicines are eloquent testimony of the therapeutic nihilism of the dominant school. The public is eager for a little simple faith in medicines on the part of the profession.

The homœopathic method with its simplicity but certainty, its safety but efficiency, is what the laity is hungry for and we must see that they get it, both for their good and ours.

DISCUSSION

CHARLES B. GILBERT, M. D.: We do not go tc our repertories and take the cause as indicating some special remedy, without taking into account other symptoms. If we follow out Hahnemann's advice and prescribe on the totality of the symptoms, removing the continually exciting cause (as a person addicted to drinking habit cannot be cured unless you stop the rum) we shall get rid of this routine prescribing.

ELDRIDGE C. PRICE, M. D.: This morning this question of the totality of symptoms came up, and now it comes up again. According to my way of looking at the question, it is a misleading expression. I suggested this morning that "totality" must mean all the little details; it is necessary to take them all into account, and because it is impossible to discover *all* these details, I still persist in believing "totality" to be a misleading term. The doctor has to get the drug that bears the closest possible resemblance in its pathogenesis to the condition of the organism that is diseased. That is the best he can do. The "totality" is a theory only, and I do not believe will ever be affianced, certainly not without present knowledge, and we should not hold to the idea.

I will repeat, in substance: The totality of symptoms is a misleading expression, and if we ever do use it, it should be used with the qualifying knowledge that it is only a theory, and that the drug that has the greatest number of indications, or symptoms, that are similar to the existing pathological condition, is the drug to prescribe.

J. H. SHERMAN, M. D.: Speaking of prescribing for the symptoms and this eating of cabbage also, recalls to my mind being called out during the night some years ago to see a child in convulsions. I inquired into the history of the child, found no previous history of illness, only that the first thing the parents knew the child had convulsions during the night. Well, for the life of me I could not find the

homœopathic *similia*. I thought of ipecac but I had no ipecac strong enough. I had some tartar emetic and made up my mind the child had probably eaten something that had given rise to these convulsions. I gave a pretty large dose of tartar emetic in a third of a glass of water, teaspoonful dose. In a few minutes the child vomited and there was a large quantity of raw cabbage ejected. A cabbage had been left in the hall way, the child had crept out and eaten some, and it caused the convulsions. In that case tartar emetic was the homœopathic remedy, or the remedy for the case. In another instance where a child had feasted on cherries or unripe grapes, that child was taken in the middle of the night with convulsions; I could see no cause for it, and thought I would see what was in the child's stomach; gave the same remedy with the result of getting a large quantity of grape skins, and after that the convulsions ceased, and I did not have to hunt for the homœopathic remedy. The point I wish to make is that there are cases where homeopathy has no application. In case of parasites use parasiticides; in cases of poisoning use chemical antidotes, or in other words, a little common sense.

W. A. PAUL, M. D.: I would like to emphasize the idea that was brought out at the close of the last paper, and that is that we try to inspire some enthusiasm in homœopathy in our practice of medicine, in the minds of our patients. There are some so-called homœopathic physicians who sometimes tell their patients that they are both ways, and that they will practice on this particular patient either way. That is very poor homœopathy. One person cannot practice perhaps as good homœopathy as another, but I think every physician should practice the best homœopathy he can. I do not believe in the apologies that we sometimes make for our practice. I believe that we should strive all the time to do a little better.

J. T. SIMONSON, M. D.: I would like to say just a few words on this old question of the importance of the *cause* of a departure from a state of health as a valuable aid or leader when making a prescription. I do not intend to take issue for one moment with Dr. Gilbert by claiming that the cause can be used as a keynote on which to prescribe, while disregarding the symptoms as a whole; but I do believe that a knowledge of the immediate cause, as a clinical symptom, is often a valuable pointer to a group of drugs, from which the correct one can be selected with much less loss of time and with greater certainty as to its being right, than if we attempted to prescribe on the general symptomatology of the case without this aid.

And conversely, the knowledge of the cause will frequently be the deciding evidence on which a prescription is based, when without it

we might hesitate for some time between two or more drugs, all of them more or less resembling the case in hand.

I believe that, once in a while, the known cause is *almost all* that is necessary for a correct prescription. For instance: Given a case of diarrhoea resulting from grief, anxiety, or any depressing emotional strain, would not most of us immediately think of Gelsemium, Ignatia, and Argentum nit? Then a short consideration of the other symptoms would rapidly lead to a correct decision.

Again: A physical idiosyncrasy, dyscrasia or temporarily disturbed condition of the digestive functions may cause a patient to suffer from severe symptoms as the result of eating something which he has not been able to digest, veal, for instance, as just illustrated by Dr. Custis. In this case, instead of normal digestion, some, as yet unknown, chemical reaction takes place between the gastric or intestinal secretions and the offending food material, resulting in the formation of a toxic substance which is absorbed, and producing marked symptoms principally toxaemic in character. Now, if it has been shown by experience that symptoms, resulting from the improper digestion or veal or any other food, are usually of about the same character in different individuals, and resemble those produced in the provings or found clinically under a small group of drugs or even a single drug, why not use the key thus presented and look over this group for our similimum before attempting to select a drug from the whole materia medica?

Of course the cause could not appear in the pathogenesis of a drug —it is merely a clinical symptom; but having been thoroughly verified, it often becomes, like many other clinical symptoms, of the utmost value in making a successful prescription.

Edward Rushmore, M. D.: We were informed this morning that the directions of Hahnemann for the taking of a case for prescription were substantially these: To take down all that the patient has to say of himself; next take down all that we can perceive upon the patient, that is by sense of sight, auscultation, olfaction and palpation—these must all be brought into exercise and everything that we can perceive by our senses is to be noted; finally we have to take all that the friends of the patient can tell us about it. Is that, sir, anything less than getting the otality of the symptoms? How can we derogate from the value of the totality of the symptoms given us from such a source and in so thorough a manner? Now for the application of drugs to this totality when we have acquired it. We may find several remedies which, to our perception, so far seem to contain all the symptoms we have learned, and we do not know which to apply. Here

we have room to apply another principle given us by the master; that these characteristic symptoms which seem to take precedence in making a chain, that is, the symptoms which have been observed, to differentiate among all these similar remedies from one another, in their action on the sick. Here we have an illustration of the principle which Hahnemann discovered, when nothing else distinguishes it; that which is characteristic in the patient; that which distinguishes him from other cases of the same kind of disease; that which is characteristic in the remedy; that which distinguishes a remedy from allied remedies in the same kind of case.

THOS. G. MCCONKEY, M. D.: Mr. Chairman, referring to Dr. Price's criticism that prescribing in accordance with the totality of the symptoms is an ideal method which it is impossible to attain because we have no drug pathogenesy corresponding to the internal pathological conditions in many diseases, I am not sure but I think the Doctor may be confounding the *effects* of disease with disease. The statical, pathological entity that we may examine under the microscope is not the disease. The fatty liver, contracted kidney, etc., are effects of disease. The function of the curative use of medicine is to anticipate and prevent those results of the disordered action of the disturbed *dynamis* which is the disease. Disease is dynamic as Hahnemann was the first to insist upon and if it is to be cured by medicines it is by their dynamic action.

I do not understand whether Dr. Sherman in his use of tartar emetic IX for the child with convulsions due to undigested matter in the stomach, considered that homœopathic treatment or not. It certainly was not. That was an instance of the hygienic use of medicine and has not anything to do with the law of similars. He probably did not intend it that way.

DR. SHERMAN: No, sir.

DR. MCCONKEY: That is what I thought. With reference to educating the laity which Dr. Paul indorses, I find them most appreciative and receptive. Homœopathy as "a simple art of healing, unvarying in its principles and its method of applying them" appeals to the intelligent layman. In coming across the continent I fell in with an intelligent man who thought that the use of quinine in malaria was a fatal argument against the homœopathic doctrine. It so happened that I had given much study to this very subject in connection with my work in clinical medicine in the college. Taking malaria as a type of disease with very striking and characteristic symptoms, I told the class we would study it as a disease as well as to learn something of malaria. We came to the conclusion, or I did, at least, that the malarial parox-

ysm,—rigor, fever, sweat,—is the response of the organism in its "spontaneous curative efforts" to use Hahnemann's phrase. The symptoms are really the efforts to stop invasion by the offending plasmodium. A few of the new generation of plasmodia escape the vigilance of the augmented police force, the leucocytes, and enter a new red cell to generate a new crop. Their presence is tolerated in the cell and not until they mature and rupture into the blood plasma does the mobilizing of the protective forces, the ague fit, again occur. Then how does quinine cure? This is an extremely important question. We studied the old school authorities on malaria, Celli the Italian, and Manson, the English. Celli assumes that quinine acts as an internal disinfectant. But he makes this significant admission: The action of this remedy, however, is not yet fully understood. Commenting on some experiments to prove this materialistic disinfectant action he says "nevertheless, the mode of action of quinine is not so simple."

Manson says: "In what way quinine acts has not been satisfactorily explained." In another place he speaks of the spontaneous recovery of a patient as proof that there resides in the organism the power to cure itself of malaria. A patient with typical malaria is admitted to a hospital. Plasmodia are found in the blood. He is not given quinine. He has a few ague attacks but they grow milder and finally cease. Fewer parasites are seen each time and finally they disappear entirely. Nature under the favorable hygienic conditions has effected a cure. Further on he says: "Strange to say" (this is Manson, 1901) "quinine given in small doses seems sometimes to wake up latent malaria and bring about an ague fit." Of course it brings about the symptoms of ague, which he can only interpret as latent malaria. Is it not altogether likely that this is the action of quinine in stirring up the reaction of the organism in accordance with the law of similars? Putting these facts together along with others of like import, that there resides in the organism a power to expel the plasmodia without using medicine; and the other, that quinine in small doses has the power to bring about an ague fit, it seems that its curative action is in stirring up this protective function inherent in the organism. In other words quinine cures malaria not as an internal disinfectant but dynamically and because of its homœopathicity to the disease.

THE KEYSTONE OF A PRESCRIPTION

H. C. ALLEN, M. D.,
CHICAGO.

A sure and firm foundation upon which to erect a superstructure is the first consideration of a skilfull, conscientious architect; and the larger and more important the building the greater the care to secure an indestructible base. The same proposition is true in the science of therapeutics; a firm foundation is the working principle upon which Hahnemann erected the science of similia. He was one of the best read men in his school of practice, and knowing its defects in the cure of the sick, he sought to safeguard his discovery from the empirical methods of the day which he had abandoned.

The first element of a successful prescription—the foundation upon which the homœopathic architect builds, is the anamnesis, *a written* not merely a mental, *record* of the case. This is insisted upon by Hahnemann, both in acute and chronic cases, as a sine qua non in the correct selection of the similimum. He assures us that if a written record of the case be made so that the physician may always have the picture of the case before him as a guide in the treatment, he can study it carefully and select the characteristic and peculiar symptoms more accurately. And this record is indispensable during the subsequent treatment of the case for he cannot refer to it constantly, not only to ascertain the effects of his remedies, but to note from time to time the changes that have occurred under their action. And, moreover, the changing and recurring symptoms often enable the physician who is versed in their significance to make a positive prognosis, either of a certain cure or a fatal ending. Here, also, *on the anamnesis,* is where the real labor of a prescription should be expended. Be sure you are right, then go ahead. If you are in doubt, give the patient the benefit of the doubt. If you do not know what to do, give placebo until you are certain of the remedy, and this can be done more certainly and promptly by taking a new *written* picture of the case than in any other way.

Hahnemann has left us his clinical experience based on years of observation, that: "When the picture of the disease, whatever be its kind, is once accurately sketched the most difficult part of the task is accomplished." With a clear and correct anamnesis once made —one that includes the peculiar and uncommon symptoms—any physician can select the remedy.

Without it no one, no matter how well versed in diagnosis, pathology or materia medica can be certain of the similimum.

Without it, the selection resolves itself into a matter of guessing, and in this field our allopathic and eclectic colleagues are our peers.

Without it, we must have an uncertainty alternation, which results in mixtures, compound tablets and drug palliation which is rapidly undermining homœopathy and making it the laughing stock of the medical world; for we profess one thing and practice another.

Without it, a return to the use of the single remedy and the success that attends a correct selection cannot be expected.

Without it, there can be no possible regeneration of our practice or hope of a return to the success of the pioneers of our school, whose prescriptions were based upon Hahnemann's methods, a carefully studied and written anamnesis.

Hahnemann tells us, Organon, § 83:

This individualizing *examination of a case of disease* demands of the physician nothing but freedom from prejudice, sound senses, attention in observing and fidelity in tracing the picture of the disease.

The following twenty-two paragraphs and foot notes give the most minute directions for the taking of the case to be found in any medical work, and yet there are many members of the Institute, I venture to say, who do not own a copy of the Organon and who have never read, much less studied, the first elements of a homœopathic prescription:

It has been claimed that this practice may be all very well in chronic cases, but requires too much time to be practicable in a large practice in a busy time. Have you tried it? If you have not you are not a competent judge. The writer has given both methods years of trial and assures you it can be done and done with a satisfaction and a success which a haphazard method can never know. If it be worth doing it is worth doing well. "When we have to do with an art whose end is the saving of human life, any neglect to make ourselves thorough masters of it becomes a crime."

Hahnemann had to meet the same objection on the score of want of time to do good work, and he leaves us the following vivid picture of how it *was not* done one hundred years ago:

The old school physician gave himself very little trouble in this matter in his mode of treatment. He would not listen to any minute detail of all the circumstances of his case by the patient; indeed, he frequently cut him short in his relations of his sufferings, in order that he might not be delayed in the rapid writing of his prescription. No allopathic physician, as has been said, sought to learn all the minute circumstances of the patient's case, *and still less did he make a note*

in writing of them. On seeing the patient again several days afterwards, he recollected nothing concerning the few details he had heard at the first visit (having in the meantime seen so many other patients lamenting under different affections); he had allowed everything to go in at one ear and out at the other. At subsequent visits he only asked a few general questions, went through the ceremony of feeling the pulse at the wrist, looked at the tongue, and at the same moment wrote another prescription, on equally irrational principles, or ordered the first one to be continued (in considerable quantities several times a day.), and, with a graceful bow, he hurried off to the fiftieth or sixtieth paitient he had to visit, in this thoughtless way, in the course of that forenoon. The profession which of all others requires actually the most reflection, a conscientious, careful examination of the state of each individual patient and a special treatment founded thereon, was conducted in this manner by persons who called themselves physicians, *rational practitioners.* The result, as might naturally be expected, was almost invariably bad; and yet patients had to go to them for advice, partly because there was none better to be had, partly for fashion's sake.

The homœopath who studies his case before prescribing and takes his time in finding the similimum, as outlined by Hahnemann, will not need anti-toxin in diphtheria, stimulants and antiphlogistin in pneumonia, nor the scalpel in appendicitis.

THE KEYSTONE OF A PRESCRIPTION

CLARENCE WILLARD BUTLER, M. D.
MONTCLAIR, N. J.

Therapeutics is "That branch of medicine which concerns itself with the application of remedies to the cure or alleviation of disease." (*Vide,* National Medical Dictionary. Billings), or "The application of special stimuli to the diseased organism." (Homœopathy, the Science of Therapeutics, by Carroll Dunham, N. Y., 1877, p. 9), for its restoration to the norm, *i. e.,* health.

Since it is wiser to start with a common understanding of the terms necessarily employed in this paper which I present to you, I make no apology for these definitions, though they be trite and elementary. And when we remember the widely comprehensive use of the term usually made both within the profession and among the laity,

the great and growing, number of therapeutic systems exploited at the present time—Bio-Chemical Therapeutics, Gymnastic Therapeutics, Electrical Therapeutics, Suggestive Therapeutics, and many others ranging from the use of crude drugs for their chemical or physiological effects, to the suggestions of Mental Healing and Christian Science, a definition limiting the term to its legitimate sphere from a professional standpoint, may hardly seem superfluous.

Therapeutics is a Science where the application of the remedy is made in accordance with that order of Nature which exists for its purposes, between the phenomena presented by disease states of, and drug effects upon the organism.

This order was discovered by Hahnemann and formulated "Similia Similibus Curantur." It is a law of Nature in that it expresses the relations between these two classes of phenomena; and it is an imperative rule of practice since it determines the method to be employed for the fulfillment of law.

All other methods are empirical.

I speak then only of the Scientific prescription, made under the homoeopathic rule for the choice of the drug, which drug, if truly chosen, becomes a remedy, and effects its cure under the homoeopathic law.

Let us note that this law of homœopathy does not, nor does it claim to explain *how* a cure is accomplished; it only promises that in curable cases a cure will be effected if all the conditions predicated by it are faithfully complied with.

The fulfillment of these conditions necessitates on the part of the Therapeutist, as we have already seen, cognizance of two classes of phenomena—those presented by drug effects, and, those presented by disease states.

These in both cases are recognized by their deviations from the normal, and all such deviations are denominated "symptoms." Let us remember that. And deviation from the normal, whether it be a gross change, patent to any observer, a pathological condition discovered only by the most delicate tests of modern diagnosis, or the slightest abnormal sensation deemed too trivial perhaps for record, is a symptom and is one of the factors which must be considered by the Therapeutist. For, the homœopathic rule of selection demands that in every case and to the utmost limit, there shall be a similarity between the symptoms presenting in the patient, and those capable of being produced by the drug.

Symptomatology (semeiology) differs from pathology in that the latter deals, not only with the visible signs of disease, but also with doctrines as to its inherent nature.

Now it may not be denied, in the present state of medical knowledge at least, that the esoteric nature of disease is problematical, based upon investigations necessarily incomplete and interpretations necessarily fallible and uncertain.

The symptoms presenting in any case of sickness; the symptoms produced by any drug, are facts. They, and they alone, are the recognizable, the known,—and if drugs have curative power over disease, they are the data for consideration in respect of their mutual relations. For, while the pursuit of any art may be, by courtesy, called scientific because of its aim and scope, none is truly so unless its fundamental data are certain and reliable.

Accepting the metaphor implied in the title of our paper (a title chosen by that distinguished therapeutist whose absence today we deplore and whose function I inadequately perform) we may say then that the bases of the Arch of Therapeutic Healing are the patient and the remedy; the material to be employed, the symptoms presenting in each; the rule for construction, the rule necessitated by the homoeopathic law.

A tissue change here, a corresponding tissue change there; a condition here, a corresponding condition there; a modality here, a corresponding modality there—these are the stones of which is builded the arch which shall make the needed connection between patient and remedy.

But unfortunately, these ideal conditions do not exist.

Our material medica, wonderful as it is in its record of past effort, greater even in its promise of future accomplishment, is in deed far from perfect. And the gods still thunder from high Olympus, none being in evidence in terrestrial medical pursuits at the present time—unless perchance, you may choose to accept some physician here or there, at his own estimate.

If now, the perfect prescription is too often a practical impossibility must we in all such cases abandon homœopathy and resort to that "enlightened empiricism" which is at once the boast and the delusion of other systems of practice? Or is there hope that, even where we cannot attain to the ideal, we may at least accomplish the practical, and effect cures under homœopathy which, although less prompt and decisive than the ideally possible, are still immeasurably better than may be made by any other therapeutic method. Undoubtedly there is this hope. Undoubtedly such cures can be made.

Now, while all symptoms are important, and none may be ignored, abundant experience has confirmed what intelligent theory would premise, that all are not of equal value. The truth of this assertion

has long been recognized in respect of diagnosis, of prognosis and even of therapeutics; but in this last art it has been reserved for homoeopathy, which alone perceives the true relations between natural diseases and drug diseases, to rightly estimate the relative value of their visible signs. And it has been demonstrated, not once but many thousands of times, from the time of Hahnemann to the present day, that those symptoms are of greatest value to the therapeutists which are "chiefly of an uncommon kind, and such as are peculiarly distinctive (characteristic) of the disease." (Organon, 164). Let there be no misunderstanding. The grand possibilities of the characteristic symptom is never an excuse for the indolent, a justification for the careless, nor a pardon for the indifferent. But it *is* an Anchor of Hope for the earnest prescriber laboring under present obstacles.

The characteristic symptom then (once more in honor of our title) is the Keynote of the Therapeutic Arch.

It cannot, it is true, make the asymmetrical symmetrical, the imperfect perfect, but its strength may largely compensate for inherent weaknesses, its solidity bear the stress imposed by unavoidable imperfections, and thus render the structure practically strong and reliable.

And the arch thus completed, the needed connection thus made, the chasm thus bridged, the god of healing seeing his law satisfied will do that which he alone must do in the final analysis, establish the cure.

DISCUSSION

C. B. GILBERT, M. D.: Discussion of papers like those cannot take the form of criticism—only that of commendation.

GAIUS J. JONES, M. D., Cleveland: I would like to know how any one could succeed, in an average practice, and carry out the provisions of that paper. I have practiced medicine nearly forty years. I have studied materia medica probably as well as most of my colleagues. I have read the Organon and studied it, but I do not find time, nor do I find it necessary to write out the history of every case. I cannot give, in my daily practice, more than five to fifteen minutes to any case, that is, any ordinary case. I could not get through my work and do it, and it is entirely unnecessary, it seems to me. Any graduate when he leaves college, should have at his tongue's end the characteristic symptoms of at least twenty-five remedies; he should have twenty-five more in reserve; and when he has an acute case, it is not necessary for him to spend that length of time to talk on the characteristic symptoms present; and if treating many in an epidemic of disease he very soon acquires a knowledge of the remedies that have

been efficient in that epidemic and probably does not have to go outside of ten or twelve remedies in the treatment of these cases; and if he has five or six in a family he probably does not spend more than five minutes on each case. It is not a method that can be adopted or followed out, nor is it necessary if a man thoroughly understands the symptoms of twenty-five remedies; he can get along without writing out or selecting the remedy in each case. Chronic cases or cases of long standing that have been through the hands of a great many others he can write down, as I do, as I always have done. I have kept a record of all my prescriptions since I began practicing medicine. I have the journals stored up, some in my office and some in my barn, at the present time, which have the prescriptions recorded, but it is not practical to carry out the method of writing out each case in full, nor is it necessary.

In regard to the teachings of the colleges, there has been a great deal said in reference to that all through the meeting. The teachers in the colleges have this to contend with: A large proportion of those who leave the colleges do not follow the teachings which they receive, and listen more attentively to the teachings of those they are associated with after they go outside, and the profession at large is just as responsible for much of this trouble that is reported, as are the teachers in our colleges.

EDWARD RUSHMORE, M. D.: One point which our friend from Cleveland has been commenting upon, the value of the record. He did not depreciate the value of the record in that particular of which I wish to speak, especially in chronic diseases; and we do not need to insist, in fact it would be immodest for us to attempt to accentuate the value of anything that had come to us from Hahnemann.

THE CHAIRMAN, THEO. Y. KINNE, M. D.: As I have been sitting here, listening to all that has been said, I have tried to boil it down, and I have come to this conclusion: You all look for the cause of the ailment; in your provings you find it laid down, "caused by such-a-thing;" and from that point you work along in the collation of your symptoms, subjective and objective, individualizing and particularizing, until with the totality you prescribe *similia*, and the work is done. You all said that you unconsciously bring in the cause of things. It cannot be otherwise: Caused by getting wet, caused by cold air, caused by sitting at an open window—a hundred causes, calls each one for a different remedy.

Go on, friends, as you have started now, and I believe upon the right road, and this American Institute of Homœopathy will be the power which will write itself down as the exponent of Hahnemannian Homœopathy.

BUREAU OF MATERIA MEDICA

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OUR MATERIA MEDICA.....J. HERBERT MOORE, M. D.

DISCUSSION: *E. B. Nash, M. D.; W. A. Dewey, M. D.; J. B. Gregg Custis, M. D.; Charles B. Gilbert, M. D.; E. Eldridge C. Price, M. D.; C. H. Evans, M. D.*

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THE FUTURE OF DRUG-PROVING IN THE LIGHT OF THE TEST-PROVING OF THE O., O. AND L. SOCIETY.....
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BUREAU OF MATERIA MEDICA

OUR MATERIA MEDICA

J. HERBERT MOORE, M. D.
BROOKLINE, MASS.

It has been stated by an eminent physician with whose life-work every homœopathic physician is, and every other physician should be, familiar, that "The first and sole duty of the physician is to restore health to the sick." Paraphrased to mean it is the *paramount* duty of the physician to restore health to the sick is to state a truth to which every practitioner into whose hands the sick are committed should subscribe.

In these days of concentration of medical attention and effort upon disease action, both in the study of its essential nature and causative factors, as well as in the beneficent measures of preventive medicine, this admonition to bear in mind the ultimate aim of the physician toward the patient already sick is apt and timely. Thorough conversance with all that pertains to the intricate problems of disease, as well as to its effect upon the human economy, is to be desired and striven for by him who desires to become a scientific physician; but of what use is this learned person to the already unfortunately and seriously sick if he carries to them in the other hand no curative measures?

Some such question as this, with a realization of its significance on account of his experience with the harmful therapeutics of his time, was the controlling factor that led this physician, who considered of first importance the cure of the patient, to be ever on the alert for a better therapeutics than that offered at this time. This attitude at length enabled his mind to be receptive to the first glimmer of light, flickering out of the like resemblance of that malarial disease to its curative specific, which through his efforts was ultimately to illumine the prevailing chaotic therapeutic measures with the noonday brightness of the homœopathic principle of therapeutics.

Second in importance to his discovery of this principle, and an outcome of it from necessity, inasmuch as the skilled artisan to accomplish his best work must have tools whereof he knows, is the method Hahnemann promulgated of ascertaining the true and sure action of drugs by testing, or, as we call it, proving them upon the healthy human organism, such action constituting the materia medica of homœopathy.

It is a healthy sign of the times in the progress of our school that we hear, in this practical and scientific age, dissatisfaction concerning our materia medica. But let us understand one another, and at the outset emphasize the fact that it is not with the principle of proving drugs upon the healthy human organism with which we are dissatisfied, for all are alike agreed that this is the key opening the door into the realm of curative drug action. Rather is it a dissatisfaction with results growing out of imperfect methods in carrying out our provings. We must discriminate between an intelligent dissatisfaction emanating from those qualified to emphasize the shortcomings of our materia medica with which all should be in sympathy; and an unintelligent grumbling and fault-finding concerning materia medica as a whole, among many who have shown no inclination to become students of this subject and to try to grasp it as best they might, resulting in a condemnation of materia medica on their part to the degree that they prefer to consign this subject to that biblical region where, to be sure, it might be thoroughly purified but, in the process, might be totally destroyed.

With this unreasonable dissatisfaction we should have no sympathy, but merely ask if materia medica is as faulty as these malcontents would have us believe, wherein is its efficiency whereby homœopathic therapeutics has proved so successful as a system of curative drug action. Such unreasonable dissatisfaction does no good in a constructive way looking to the betterment of our materia medica, and in a destructive way merely spreads discontent and discouragement among those who are conscientiously trying to grasp a subject difficult at its best; it injures the cause of homœopathy; it makes poor prescribers still poorer; it takes no cognizance of the giant homœopathic materia medicists and prescribers who have made homœopathy what it is to-day, from Hahnemann and his contemporaries and their successors down to Richard Hughes of the old country, and from our own Hering down through the line of Lippe, Dunham, Farrington, Boeninghausen and Allen of our own country.

Let us rather consider our materia medica in the light of the field of grain in which are both wheat and chaff, and let us bring to bear an intelligent winnowing process by acquainting ourselves with its history, and by teaching our students the history of the proving of drugs, that they may acquaint themselves with the environment and influences governing Hahnemann and his followers in the different stages of their work in this direction. By studying together in this way the method by which our materia medica results have been obtained, we can take a more intelligent view of the labors of those who have worked in this field and the better know what to praise and

accept, and what to condemn and reject; and a further advantage will be gained in that we shall be interested in our study of materia medica from the first.

Let us first ground ourselves and our students in the knowledge of what a past-master was Hahnemann in his provings and observations as to drug effects on the healthy human organism, from his first perception of the homœopathic principle of therapeutics in 1790 up to the end of his brilliant and successful Leipsic career ending in 1821. Let us credit him with the consummate skill with which, with the meager resources then at hand, he proved and gave to the medical world in his first materia medica—"Fragmenta de viribus"—published in 1805, the first twenty-seven drugs, more than three-fourths of which are our polychrests of to-day, and his indications our indications. The same may be said of Hahnemann's own provings of the thirty-nine drugs in the first edition of his second work, "Reine Arzneimittellehre," published from 1811 to 1821. My apology for stating these matters of history before this Institute is that we might emphasize, in these days of materia medica skepticism, that at least this contribution of Hahnemann's, of sixty-six drugs up to this latter date, constitutes a "Materia Medica Pura" in fact as well as in name. It is a testimony to the reliability and thoroughness of the provings and observations as to these sixty-six drugs that, rapid worker as he was, thirty-one years elapsed in their production. The second edition of his "Reine," published from 1822 to 1827, completes Hahnemann's materia medica work up to the time of his production of the "Chronic Diseases," in 1828. If a student of materia medica is inclined to depreciate Hahnemann's work in drug-proving up to this period, let him acquaint himself with Hahnemann's own acount of conducting his provings, as well as the account by Hering and the earnest words of commendation from Dudgeon and Hughes.

On the other hand, if time allowed, it would be interesting to detail the influence of the difference in environment and patients of the Coethen period over that of his brilliant Leipsic career upon the reliability of the provings and observations making up his "Chronic Diseases." It would be interesting to weigh the influence upon the latter, of his commitment to infinitesimal dosage at the same time and especially his dogmatic assertions as to the special efficacy of the 30th attenuation. We should be as free to criticise the provings and compilations of Hahnemann, as well as of any other of his work or theories, when occasion necessitates, as we are prone to praise that which is good; and we cannot but admire the candor of Richard Hughes in adjudging as unreliable many of the drug pathogeneses

contained in the "Chronic Diseases." That this judgment is fair and from the merits of the case is evident from the commendations he extends to Hahnemann when speaking of the latter's work up to this date.

A student of materia medica should acquaint himself, as well, with the history of the proving of drugs by the contemporaries of Hahnemann, of the Austrian provings and of those of our own American authorities. A certain portion of this work is reliable, much is unreliable, and its arrangement is not of the best and not conducive to absorption by a logical mind, and not enough has been made of the records of provers; but let us give full credit for all that is good while questioning the bad. This judicial attitude toward materia medica and its workers in the past, while rendering unto Cæsar the things that are Cæsar's, will, on the other hand, lead all students of materia medica to sympathize with all intelligent attempts as to its betterment. I have made this plea for moderation in condemning our materia medica, because I do not believe it necessary to engage in a destructive crusade against that which is reliable in order to do the best work in constructing a new materia medica, and because I believe such condemnation has been a factor in bringing about in many quarters an unwarranted loss of confidence in homœopathic therapeutics.

It is not my purpose to impinge upon the province of my phonetic namesake who is soon to tell us "How to Prove Drugs," but merely to present a few thoughts of how our future materia medica should be made up. Until a few years ago our materia medica comprised merely a tabulated symptomatology arranged in the anatomical schema. It takes but a man with a logical mind to soon appreciate the shortcomings of this method; and herein lies the greatest objection to Hahnemann's best work in drug proving, in presenting his findings by this method to the exclusion of the records of provers. Whenever these symptoms are authentic as legitimate effects of drugs acting on the provers, and not gratuitous offerings of their imagination; whenever intelligently and concisely recorded and with reference to the records of provers; such symptomatology in its true significance of "The sum of scientific knowledge concerning symptoms" is always to be cultivated in proving and prescribing drugs. In fact the value of symptomatology as a reliable method of recognizing both disease and drug action is being appreciated even in the ranks of the old school, as witnessed by Sydney Ringer's argument in its favor in the introduction to his "Handbook of Therapeutics."

Granted this full value of symptomatology in ascertaining the

action of drugs proved upon the healthy human organism, and in prescribing the proved drugs against disease; mere symptomatology, standing alone and apart from the relative action of the drug causing the symptoms, should not exclusively be made use of in establishing a scientific basis of the materia medica of the future and a practical method of acquiring and applying the same. At a time when about all that was known of diseases was the subjective symptoms, and the objective only so far as the unaided senses of the physician could discriminate, a materia medica based exclusively upon symptoms of drugs observed in this same limited way was an instrument sufficiently molded to its work; but in these days, when we are able to delve so much further into the recesses of disease, with the aid of our modern diagnostic "scopes," which so many times lead us down to the unerring pathology itself, we must follow in our drug provings, and with the aid of the same instruments of precision, as far as we can penetrate so that we may be able to record the where, when, how and why of drug action and, whenever possible, the ultimate pathogenic effect of the drug upon the part of the organism which it affects. Whenever this latter is possible then are we in possession of the most effective totality of symptoms, comprising a recognition of the pathogenic effect, itself, upon the part affected by the drug, combined with the ordinary symptomatology of the drug. A more practical and scientific materia medica cannot be had than that afforded by this combination.

The great difficulty experienced in mastering materia medica has been that in the past it has not been compiled and presentd in a logical manner, and for this reason mere symptomatology standing alone will not afford the most practical method of acquiring and applying materia medica because it relies upon memory alone, unaided by any logical or other helpful measure. Such helpful measures must be obtained by a thorough study of the pharmacodynamics of drugs in our provings; and the more thorough such observation and study the nearer we shall approach to a rational materia medica for the reason that it throws many side lights upon the action of the drug and leads to a more intelligent comprehension of its symptomatology.

We find an analogy in the study of disease, for, when the medical student is first made acquainted with disease, we seek to impress upon his mind the results which follow when the body is invaded by the disease; but in addition to dwelling on its manifestations revealed by what are commonly known as symptoms, we teach him where and how it acts upon the body. Mere symptomatology alone, with no regard to the diseased condition of the body producing these symptoms, will not make the skilful judge of disease processes going on in the system;

and decisions rendered will not be those of the unerring diagnostician. Rather is this brought about by an intelligent appreciation of the underlying morbid processes which produce the symptoms. Every disease has its elective affinity for a distinct part or parts of the system and a specific action on those parts. A correct understanding of this affinity and action of any disease in question will lead to a more intelligent recognition of its symptoms, and one that will the more readily establish the identity of the disease.

As in this intimate knowledge of disease relating to its diagnosis, so should there be a like intimate knowledge of drug action upon the organism relating to the treatment of disease for each drug as well has its elective affinity for a distinct part or parts of the system and a specific action on those parts; and such knowledge of the pharmacodynamic action of drugs comprising the where and how they act upon the system will the more readily and certainly enable us to get hold of, to retain and to make use of for therapeutic purposes the symptoms of drug provings upon the healthy human organism. Symptomatology, whether of diseases of drugs, tells us that some abnormal action is going on in the system. Can we not deal more intelligently with both disease and drug if we know just what is going on, whether we are diagnosing diseases, are studying symptomatology of drugs or applying the drug against disease?

In the study of physiology it would be very unsatisfactory to merely learn by routine a tabulated scheme of normal functions with no consideration of their method of production; and in the study of drug effects upon the healthy organism it is equally unsatisfactory to attempt to learn an anatomically arranged schema of symptoms with no attention or consideration given to the why and wherefore of the relative drug action producing the symptoms. In the face of the fact that this omission to logically consider the action of a drug in our study of its symptomatology is responsible for the difficulty experienced in acquiring and applying materia medica, we should advocate the logical and inductive method of studying this subject, for this reason, if for no other, that it explains the symptoms of the drug, and thus enables an easier and more intelligent grasping and retention as well as application of the same.

But you of logical minds may ask why the necessity of emphasizing the demand for such a materia medica. It is necessary because there are those who argue that the less one knows about a drug save a tabulated schema of its symptoms, the better homœopathist a physician becomes. If this is so, it is a testimony to the weakness of the philosophy of homœopathic prescribing. Against this we contend that the

more that is known about the action of a drug in its pharmacodynamic relation to its symptomatology applicable to homœopathic therapeutics, coupled with a sure, concise and vertified symptomatology, the more desirable homœopathist a physician becomes. This latter was the view of our lamented Dr. Hughes, who stands in his writings as the exponent of the practical and scientific side of our materia medica; is the reason why the earlier homœopathic physicians emanating from the old school experienced, in their all-round knowledge of drug action, less difficulty in mastering materia medica and are found to have been among our best prescribers; is the factor that makes Sydney Ringer such a good, though unacknowledged, homœopathist in his absorption and consideration of the therapeutic action of many drugs; and is the path by which skeptical therapeutists of the old school are to be led out of their unbelief so far as curative drug action is concerned, into the perception that it is the similarly acting drug that will cure a given disease if prescribed in strength of dose below that necessary to produce its physiological action upon the healthy human organism.

Four requisites to an intelligent study and application of homœopathic materia medica should be recognized; first, a thorough knowledge and intelligent understanding of the philosophy of homœopathy so far as this is revealed; second, such a familiar acquaintance with the names, appearances and properties of remedies as comes not only from a knowledge of practical homœopathic pharmaceutics, but from personal contact and handling of the remedies themselves; third, a posology having none other than a scientific and reasonable basis, which in the construction of our materia medica should embrace only material medicine appreciable to the senses, and in the therapeutic application of materia medica should not transcend a degree of dilution of remedies necessary to comply with the following practical and reasonable rule of dose: of using that strength of medicine which, administered in proper form and at proper intervals, will thoroughly eradicate the disease without aggravating presenting symptoms or creating extraneous ones. This last requisite is a question whose importance as regards the best good of homœopathy in the future is second only to an authentic and logical materia medica, and one which must be dealt with by our school until we establish our homœopathic posology on as scientific and reasonable basis as is our law of cure.

Concerning the first two requisites mentioned, it has never ceased to be a matter of appreciation to the writer that he enjoyed the privilege of such close personal contact with a good student of homœopathy and successful prescriber of its therapeutics as was possible in having

had his father for a preceptor; and that through this influence and instruction he became thoroughly grounded in his belief and confidence in the legitimate claims of homœopathy by an intelligent appreciation of its tenets, and became perfectly familiar with the names of the remedies, their gross appearances, the preparation of their dilutions and triturations not excepting many an hour over the mortar and pestle when one full hour was religiously given to the preparation of each trituration; not to mention the daily care of the medicine drawer and buggy-case—this thorough acquaintance with the remedies, as household words and familiar faces, before engaging in the technical study of materia medica in the medical school. This personal allusion will be pardoned if accepted to enable me to emphasize the importance of this preliminary experience with drugs to the medical student. In the case of materia medica, more than in any other branch of medical instruction, would great advantage redound to the medical student. If the revival of the old method of preceptorship prior to the student entering the medical school could be brought about. In the absence of this, the college must take its place and its teaching of materia medica should reach rock bottom and be founded upon an intelligent understanding of the tenets and philosophy of homœopathy to the extent that each student should be able not only to possess, but to give reason for, the faith that is in him. Following this, such thorough acquaintance and familiarity with drugs themselves, as has been indicated, should precede the study of their effects comprising our materia medica.

A fourth requisite to an intelligent study and application of homœopathic materia medica, and one up to which the other three will invariably lead, is confidence in drug therapeutics. It is claimed by many careful observers of the higher things of life, that the intimate acquaintance with human biology, which characterizes the study and work of medical men, tends to turn their minds away from the truths of immortality; and it seems as if a parallel materialism is engendered by this exhaustive study of pathology, bacteriology and all investigations in the realm of disease processes, that in time leads up through therapeutic agnosticism to therapeutic nihilism at least so far as *curative* drug action is concerned. That this materialism, engendered by the excellent and successful work which has been carried on by them along disease lines during the past few decades, should lead the old school into therapeutic skepticism and in many cases therapeutic nihilism so far as curative effects of drugs are concerned, is not surprising because explicable by the great contrast existing between the potent results of their work on the disease side

of the picture, and the impotent results of their therapeutic work during the past century; as well as explicable by the reaction from their old therapeutic methods which they themselves now acknowledge to have been crude, harsh and harmful.

Homœopathy calls upon its adherents to stand firm against the tendency of such gross materialism, and especially appeals to those of her physicians, whose special lines of work lead them into investigations of the essential nature of disease processes, not to allow themselves to be led away from the truth of the efficacy of the curative action of drugs when prescribed according to the homœopathic principle of therapeutics; even though the treatment peculiar to their specialty demands operative or other mechanical technique.

To this appeal one of the largest and strongest of the allied special societies connected with this Institute has already responded in test-provings of a single remedy, as we shall soon hear from Dr. Bellows, who will tell us the results of this work of the committee of the O. O. & L. Society. Whether or no this specific work and its results shall prove practicable, homœopathy especially appreciates the efforts looking to the betterment of our materia medica on the part of a society devoted to specialism, and is confident that efforts having such betterment in view must ultimately lead to practical results. Let us all, general practitioners and specialists alike, place ourselves on record as in sympathy with all such efforts; and pledge ourselves to get down to honest hard work, giving aid in pocket, time and brain so far as is in our power to all materia medica work yielding practical results, in order that we may ultimately accomplish the object for which this paper is presented, namely, an early possession by our school of a materia medica, authentic in its construction and logical in its applicability.

DISCUSSION

E. B. Nash, M. D.: I do not feel very well prepared to speak on this paper. I had more particularly wished to speak on the subject of how we should teach materia medica. There has been a complaint made to me many times that materia medica was not properly taught in our colleges. I do not know how true that may have been. I presume there is some truth in it, but there is always room for fault-finding, even when work is very well done, and there are always fault-finders to be found. Be that true or not, there is great importance attached to our department in medicine, as to how we teach materia medica; that is, the homœopathic materia medica. Upon the proper teaching of this subject we stand as a distinctive school of

medicine, and if we do not see to it that it is carefully, conscientiously and rightly taught, we are going to lose our students, simply because we are not distinctive; many students have already been lost for that reason, going over to the old school, saying they do not get taught what they pay their money for. Now, of all the branches of the study of medicine, I do believe that we should make the teaching of materia medica and therapeutics of paramount importance.

There are a great many roads that lead to Rome, and if we only get there it does not make any difference what road we take. A great deal has been said about the teaching of materia medica. Many opinions have been expressed. I simply will give my own. The subjective symptoms constitute the voice of the so-called disease, not only showing the morbid disease, but, better still, often sounding the alarm of warning before the pathological change is marked. If there is any place where we can successfully cope with disease it is at the very beginnings, and it is here where we can do our best work, and achieve our best results, and so typhoids can be aborted, and pneumonias be cut short, and most all diseases be overcome in their incipiency, we being guided to the remedy by the subjective symptoms. Not only this, but even after the pathological changes have taken place, by looking for the characteristic symptoms of our drugs, we can often remove these pathological products by curing the conditions on which they depend. Under the action of proper medicines the effusions, and even pus formations, are absorbed, and swellings and hypertrophies are made to disappear, condylomata drop off; so we come to the conclusion that the best way to teach materia medica is to begin at its symptomatology, as did Hahnemann, to get an understanding of all drug effects. And so we teach.

W. A. Dewey, M. D.: This subject is so vast that it certainly cannot be covered in ten minutes. I agree with the last speaker in one of his assertions; that is, that the less the distinctions between the teaching of the two schools, the greater will be the loss of student. We have observed this in the institution with which I am connected. There is one idea, however, that has come to me, and that is, on the use of text-books, and that leads us back still further to the instruction of our students in the bibliography of our school. I find that some of our students are interested in the older books. They like to trace back to articles that have been written in explanation of the provings. For instance, in the *British Journal of Homœopathy* there are explanations of our provings, which furnish most interesting and instructive reading. Some of the journals in this country, the *New-England Medical Gazette*, for instance, in its earlier

numbers contains some very interesting papers. I would suggest to teachers of materia medica that they familiarize their students with the old books, for they are very valuable.

J. B. GREGG CUSTIS, M. D.: To add force to what has already been said, I, too, consider materia medica as a most important branch taught in our school. Those of us who feel a special interest in the study should aim, not only to become specialists in prescribing, but to arouse the enthusiasm of all students, so that the standard of prescribers may be raised so high that they can hope to fill the large field among specialists which is open to them.

One of the most important points to be covered by the teacher is the use of the books on materia medica which we now have at hand. We hear as the great objection to careful prescribing from both the student and practitioner the immensity of the materia medica. Those of us who use the materia medica most know that its volume does not detract from its usefulness. To the student it is appalling. If the student can be taught how to use the books at hand, along with the repertory which we all appreciate, his interest will be awakened, his ambition aroused and dryness and dullness disappear. As I said yesterday, on our actual work we profit by experience based upon our years of practice, and the practice of every one who has preceded us. We have from long experience learned to divide the patients as they come into our offices into the Bryonia, Pulsatilla or Nux Vomica class. We do this unconsciously. If we can teach the student how this is to be done we will be making his burdens much lighter. This can be done by showing the characteristics of the remedy first. We can all draw the picture of the Phosphorus patient so that the student can pick him out on the street. The Nux Vomica man can be selected from those about the breakfast table, and so on. To my mind this makes the lecture far more interesting than are the symptoms as laid down in Hering. Fix the mind of the student on some characteristic of the remedy which will lead him to study the drug in detail, and as his experience enlarges he will absorb more and more of the detail and become familiar with the genius of the remedy.

I would again emphasize the necessity for teaching the use of the repertory in connection with materia medica and the teaching of our methods of prescribing. I think that homœopathic therapeutics should be taught as a separate branch, because we all think of the group of remedies whenever we meet with a certain class of diseases. In summer, for instance, when called upon to see a sick baby we think of a group of remedies, and frequently select one from the first

group thought of. If the patient presents a peculiar symptom not found in this group we go beyond this and take another, and so on until the case is covered.

Do not give your students too much of theory. Tell them how you work yourselves, how you use the materia medica, and I believe the results will be all that you can wish for.

CHARLES B. GILBERT, M. D.: There were two points in the latter part of Dr. Moore's paper which particularly interested me; the first was in regard to the teaching pharmacodynamics.

It is well to know how remedies act, but to my mind pharmacodynamics does not teach the homœopathy of Hahnemann, but a modified practice for allopathic students, for whom it was written.

The doctor said that the reason why the earlier homœopathists practiced better, was because they knew allopathy as well. I believe that the reason is because, knowing allopathy, they discarded it and confined themselves to the law strictly, digging into the materia medica according to the symptoms and not according to pathological theories.

ELDRIDGE C. PRICE, M. D.: There are four pathies: Homœopathy, antipathy, isopathy (so-called), and allopathy. It is presumed that we all know what homœopathy is; that is, we think we do. So far as antipathy is concerned, it is illustrated in the treatment of a disease condition by the use of a drug which will produce exactly the opposite condition from that under treatment. As an illustration, take a heart in a depressed, weakened condition; give a physiological dose of digitalis, and in response the heart becomes stronger. Another illustration is a cold surface of the body, to which heat is applied for the purpose of restoring the normal heat. Antipathy may be considered a law of hygiene, the law of demand and supply—you are hungry and you eat. All this illustrates the law of dissimilars.

Isopathy is the use of a nosode to relieve the condition which has produced that nosode. In my opinion, there is no such thing as isopathy. Analyze it, and isopathy becomes homœopathy.

Allopathy is the application, not of a principle, but of a method. For example, in a dropsical condition due possibly to liver trouble, a diuretic is given, the kidneys are called into service, and the water is eliminated. Another illustration is the use of a purgative to relieve a congested brain, and still another is the use of a mustard plaster applied to the skin of the chest to cause derivation of blood from a congested or inflamed lung. In these cases healthy organs or tissues are called upon to relieve other diseased organs or tissues.

I would like to say a word about teaching materia medica. In my opinion the foundation rests upon an understanding of the princi-

ples of medicine, which I have discovered from inquiry are not taught very thoroughly in our colleges.

In his remarks this morning Dr. Wesselhoeft expressed views almost identical with my own. Formerly, when teaching the class, my habit was to take up a group of drugs and teach the characteristics common to that whole group, then differentiate the individual characteristics which, taken together, make recognizable individuals of the different members of the group. Having thus outlined the general sphere of action, the detailed symptomatology is then taught. Following come the analogues, and the drug is complete. The history of the drug was also another important part of the information it was my endeavor to instil into the student. This is something that for a long time was sadly neglected in our text-books. An illustration may be found in the first publication of the symptomatology of lachesis, by Dr. Hering. He gave no hint whether this drug was derived from the animal, vegetable or mineral kingdom, and in consequence many practitioners not versed in zoology were in utter ignorance of the physical nature of the substance from which the symptoms had been drawn. The student should know all the facts about a drug that will in any way assist him to remember its purposes.

There is one thing which has been impressed upon me by this meeting, and that is the harmony which exists on the subject of the scientific provings of drugs. I have not heard one word against the health record. When we first had our materia medica conference in 1895, at Newport, there was much opposition to giving any attention to the preliminary health record of the prover. The opposition thought it was not necessary to make a close study of the normal health of the prover, before beginning the experiment.

I was much interested in Dr. Moore's paper this morning. It was one of the most practical papers in its suggestions that we have had this session. The ideas expressed therein lead up logically to the work done by Dr. Bellows, and from which work I hope to see evolved an institute of drug provings, a college of provers. On this point I regret that the name of Dr. J. P. Dake has not been mentioned, as he was probably the first man to advocate such an institution, and if he were now with us I am sure he would rejoice to see that not only has no opposition been raised, but that so much enthusiasm has been shown at this meeting about raising funds with which to endow the proposed institute of drug provings.

C. H. Evans, M. D.: I would like to ask Dr. Price if I understand him to defend isopathy. Did I understand him to say that it was a form of homœopathy?

DR. PRICE: I do not think there is such a thing as isopathy. You cannot get two things alike.

C. H. EVANS, M. D.: Isopathy certainly has no relation to homœopathy. It is very old and was practiced by Asiatic peoples. The use of the product of disease for the treatment of that disease is almost as old as time itself. The old school is exploiting it to-day in serum-therapathy—and some in our school. It is not homœopathy in any sense of the word. The product of the disease will not cure the disease. It never has, although it has been exploited over and over again. Even our own school has tried it, and in the more recent times the nosodes are the outgrowth of such teachings and belief. The old idea that homœopathy is nothing but treating a disease with the products of that disease is decidedly wrong. The nosode of disease is not used in the treatment of disease as homœopathic. It is not homœopathic to treat any disease with the products of disease. It is treating the disease, not treating the patient. It is always given for the disease itself, and when that is done they are entirely outside of homœopathy. Hahnemann has proclaimed against it in the introduction to the Organon, in the Organon itself and in his Chronic Diseases, as foreign to homœopathy.

E. C. PRICE, M. D.: I would just like to ask Dr. Evans, if a nosode does cure, upon what law or principle does the cure depend?

C. H. EVANS, M. D.: I cannot say just how it acts. We do not know anything about it. We have no records of cases cured by the nosode. I just wanted to emphasize the fact that the treatment of disease by the products of disease cannot be considered as homœopathy in any sense of the word.

HOW TO TEACH MATERIA MEDICA

There being no paper, the Chairman of the Bureau presented for basis of discussion the following topic-headings:

I. How to prove drugs in order to teach materia medica.

II. Methods of teaching by { **The Preceptor.** / **The College Professor.** / **Text Books.** }

III. How to apply.

DISCUSSION

CONRAD WESSELHOEFT, M. D.: I would like to talk a little while on how to study materia medica. Fifty years ago Dr. Herschel of Dresden wrote a very good book upon homœopathy, which was read a great deal in Germany, but not used here at all. In this book was an article on "How to Study the Homœopathic Materia Medica." It would carry me too far to go into it so thoroughly as did the author, but it was simply to take each remedy and divide its symptoms into three groups,—first, the symptom; second, where the symptom occurs; third, the group under which it occurs. Let each student take a good proving and arrange his symptoms in that way, and he will then get an idea what the proving means. If the proving is very long, it is hard work, but that is what we must do.

About twenty-five years ago I wrote a little brochure on "How to Teach Materia Medica." I was then teaching the subject in Boston University School of Medicine, and thought I would give the students something to go by. My plan was, instead of beginning with the materia medica alphabetically, to go to work scientifically, and look over all the vegetable remedies first. I took Gray's Botany and was surprised to find how many of our remedies were to be found in his book. Take, for instance, the group which contains belladonna; there were something like six in that group. Now take the materia medica and divide it up in that way. Learn one medicine at a time, and then you are over the worst of it, but do not try to learn it alphabetically. That is like trying to learn a language by learning the dictionary by heart. All these methods require work, and most people do not want to do that; most of us would like to have a machine that would put it right into the brain without any exertion on our part. Take the chemical groups, the lead group, the arsenic group, the gold group. If you know one of the group well you know considerable about the rest.

The next important point I think is to teach the student to make short provings. Those who did it with care derived much benefit therefrom. The only thing I demanded of them was that they should work together. I gave six or eight of them a remedy to prove and compare. Then they can take up another, and so on. Now I demanded that they should agree. I have been fought on that subject and fought bitterly. The idea has been that the more provers disagreed the better the proving. Now nothing is more erroneous than that idea. Shall we throw out a symptom because it seems to be the only one standing alone? No! That might be the one with which I might cure the patient. Provers must agree to a reasonable extent or else the proving is worthless.

Another good exercise is to let the student arrange the proving in the usual anatomical order. It will not be so long before they can do it. Let them learn to boil it down. Read it over; shorten it; after they have done that let them condense it according to their own ideas. After they have condensed it let them divide it into the anatomical regions, then after they have done that let them arrange the symptoms according to Herschel's method, in columns, a column for pain, for instance, where it occurs, what kind of a pain it is, and what part of the day does it occur, etc. In this way, they will get their medicines all in good order. That is my method of teaching materia medica. Our older members will remember it. I am conceited enough to believe that my way is the best.

A. P. HANCHETT, M. D.: I have been a student of medicine for about twenty-five years, and always expect to be a student. I think if we can teach the student that his studying is not over when he graduates from college, that that is just the beginning of it, and that he must keep on forever, we shall do well.

I well remember the time I was called in consultation with a brother practitioner, and after going over the case carefully with him I wanted to look it up in my materia medica, but I found that he had none in his possession. That is too often the case with many practitioners. We can never rightly interpret the symptoms of a case in hand without reference to our numerous volumes on materia medica. I do believe that our teachers make a great mistake if they do not teach their students the daily use of the repertory. And yet some of the older ones are not so helpful. Benninghausen's has been in my hands many times, and yet is not very helpful to me. Winterburn's little hand-book helps me a great deal more.

FREDERICK B. PERCY, M. D.: There are few things which a teacher of materia medica approaches with more diffidence than this

very subject. The reason is evident, in that we are all specialists in this branch of medicine and all alike feel competent to pass judgment upon any plan however wisely conceived.

This subject of teaching materia medica is one which is very near and very dear to me, and if anything has resulted from the experience of the past twenty years it has been a scheme of study which seems to me covers the ground of one method of teaching our materia medica. Theoretically, I am thoroughly convinced of one thing, and while it is not now apparent it is bound to come, and that is that the first year in our medical schools should be a year devoted entirely to the consideration of medical subjects. I mean that the requirements for admission shall be so advanced or a college degree demanded of all applicants which shall make it possible for students after the first year of work to take up the true work in the materia medica. My feeling in regard to the first year has been greatly strengthened by a rather interesting series of letters which has come to my notice during the past few weeks. Letters of inquiry were sent to certain men, recent graduates, with the express purpose of getting their feeling on the subject of teaching the materia medica. The letters were sent by a person who was entirely unprejudiced, and I have had the benefit of the replies. What seems to be regarded as the most important is that the "Organon" should be carefully gone over during the first year. I am not disposed to question the wisdom of this, but I am more and more convinced that the first year should be given up to wide reading on the subjects of homœopathy and its history, and for that reason I have each year suggested a course of reading which includes such works as "Ameke's History of Homœopathy," "Bradford's Life of Hahnemann," "Granier's Conferences," Russell's works, and particularly the introduction to that admirable book on "Rheumatism, Epilepsy, Asthma and Fever," as well as some interesting sketches which are bound together under the title of "Disorders of Digestion;" "Sharp's Tracts," Yeldham's works, Henderson's controversial writings. Above all, I have recommended for their careful study "Hughes' Science of Therapeutics" and "Manual of Pharmacodynamics." This is truly a preparatory course. For a readier appreciation of this broad subject my schema is as follows:

1. The name of the drug. 2. Its preparation as used by the regular school and their methods of using it. 3. Homœopathic preparations. 4. Its local uses. 5. The physiological action. 6. Cases of poisoning, with antidotes and treatment. 7. The proving of the drug. 8. Generally accepted uses. 9. The homœopathic application of the drug; its different spheres of action; its most marked characteristics;

its symptomatology. I try to give them a word picture of the drug itself, and following that a schematic picture of the drug, and then some thoughts in regard to its clinical application. Although this method has been criticised, I know perfectly well that students going out should know the difference between a drug disease and a disease which is not dependent upon drugs, and it can only be learned in this way. You all know that certain people are peculiarly susceptible to the action of mercury; that is, they have an idiosyncrasy for that drug, and when they come to you with certain peculiar symptoms you examine the mouth and find there in a red rubber plate or amalgam filling, an explanation of the whole trouble. Rectify this and the trouble is over; otherwise months of unnecessary suffering follow. Can you not recall cases of follicular tonsilitis, yes, even cases of diarrhœa, dependent upon poisoning from these sources? I have reported a tase of typical mercurial tremor which had lasted ten years, and the possibility of a plate as the causative agent had been entirely overlooked. Only this morning I was called hurriedly by one of my very dear friends. He said that he had consulted a physician and had been given mercury 3x. Now it does not seem possible that mercury in the 3rd would have any particular effect, but I found him this morning with an erythema covering the inner side of the legs and abdomen. Six weeks ago in St. Augustine he was ill with colitis, and the physician gave him merc. dulc. and he had the same trouble. Before this, still another physician gave him biniodide of mercury, and he went through the same suffering. Now I want those who graduate from our school to be prepared to say positively when they see such a condition, "This is not a disease, but the action of a drug."

In regard to this other matter of proving drugs, which interests me very much, it seems to me that the Institute should realize one thing which has never been sufficiently strongly stated, and that is that the amount of time which Dr. Bellows has given to this work is simply stupendous, and with the help of a stenographer every moment of his leisure time has been given up to this question of proving.

One hesitates always to confess his limitations, but this proving business is certainly my stumbling-block. A physician, now deceased, kindly asked me to co-operate with him in the proving of a new remedy, and I entered upon the work with my students with great enthusiasm, and we did our best. At the end of some weeks when the provers' records were carefully gone over, and my friend, Dr. Colby, co-operated to see how much of the matter we should cull, the red pencil left so little that we wrote the physician that the results

were so far from what we expected that we would publish nothing. We began with two other drugs, but the results were the same. May it not be that our failure is due to the Boston atmosphere, for you will remember that when Dr. Conrad Wesselhoeft re-proved Carbo veg. the results were not entirely satisfactory? A few years afterward our recently elected president of the American Institute of Homœopathy took of the tincture of a well-known remedy up to 280 drops doses, and the results were practically nil.

This new proving of which Dr. Bellows has spoken has been conducted with such earnestness that I know it will be a precedent for those who are interested in the subject, and we trust that Boston may vie with other cities in offering to the Institute provings which are absolutely to be depended upon.

CHARLES MOHR, M. D.: When Dr. Hering presented the subject of materia medica to his students, he would simply endeavor to impress them first of all with the underlying principles of drug administration, as did Hahnemann. He would clearly point out when a drug was antipathic, when it was isopathic, when it was homœopathic, when it was allopathic. Then he would go and take up the symptomatology of the drug, and give the symptoms in schematic form, and it was practically a matter of memory as to how much a man could retain and utilize after he got out into practice. In those early days we had no pharmaceutical laboratories, and while the different principles of administering drugs were given in didactic instruction, there was no practical demonstration as to the way drugs were given according to the different systems—allopathy, antipathy, etc. All we got were symptoms that were called characteristic of a given drug.

Now there is one point just here which occurs to me. Hahnemann, as well as Hering, knew everything there was to be known about a drug substance before he began to make a proving, and before he made use of those provings as indications of a drug when it was to be administered as a therapeutic agent; but perhaps he did not realize the importance of this knowledge for the benefit of doctors who did not have this antecedent knowledge of drugs before studying the symptoms in schematic form. When a man studied aconite, although acquainted with the mental symptoms and the symptoms pertaining to the various organs of the body, he could not tell what aconite was; he knew nothing of its appearance or morphology, nothing about the plant, nothing about its alkaloidal principles, so that a man in those days after he obtained his degree was ignorant of a great many things that are essential to know to-day, and I believe heartily what the professor in the Boston school, Dr. Percy, said,

that the students should be instructed in everything pertaining to the drug before he is given one characteristic symptom of the drug. He must know what the toxicology of the drug is, because many of the symptoms are so vague, so immaterial as to be of no use, unless the student knows upon what subjective symptoms depend; how they have been produced, and that bring us to another point, and that is the sequence of symptoms. Now, Dr. Hering did make a strong effort to show that in order to have a drug picture you ought to know the sequence of symptoms; how one symptom is co-related with another, before you can have a complete picture necessary to make a good prescription. I think perhaps the members of this Institute know that Hering early rather leaned toward the idea that in order to practice homœopathy thoroughly, we must have not only a minute knowledge of physiology, but we should also know thoroughly, pathology, and in his later years he endeavored to impress that upon his students, and he would say that before a man could know what was pathological he should know what is physiological. In my opinion a man has no right to give even the most infinitesimal dose of medicine unless he knows what he is treating, and if he does not know the pathology he does not know what to do. The anatomical lesion never, I believe, gives us any indication for the administration of the homœopathic remedy. The anatomical lesion, if we understand it, will enable us to determine what must be removed, and how it ought to be done, if homœopathy cannot do it. Then take the symptoms which are believed to be dependent upon the organic changes, or on the anatomical lesion, as leading symptoms for the homœopathic remedy, and when the objective and the subjective symptoms or the "totality of the symptoms" are truly appreciated, we may more often make a good homœopathic prescription than if we simply took into consideration the subjective symptoms, but I am convinced, on the other hand, that the physician who simply considers the anatomical lesion, and makes that alone the reason for the administration of a medicine, is bound to fail in his efforts to cure.

A. Eugene Austin, M. D.: Allow me to travel with a man all day and I will tell you what kind of a home he came from. When a young man goes to a medical college, he has thought the matter over carefully, and has come to believe that Hahnemann's truths will be his choice, and thus he comes to sit at the feet of his instructors for four years, at an age when the mind is moulded more definitely than at any period of his life. If the teacher puts his whole soul in the work, the student believes him. Then you will teach materia

medica as it should be taught, and your student will stand for it. If a professor wants his pupils to believe in the homeopathic remedy, he must believe in the remedy himself. You cannot make a man believe in anything that you do not believe in yourself.

Let us not in this wonderful age lose anything by lack of faith. When a brother practitioner tells us that he has made some wonderful cures with the m. or cm. potencies, believe him, as he is a trained man in medical science.

The men teaching materia medica in our colleges are supposed to teach homœopathic materia medica, and I would advise them to leave the teaching of old school materia medica in the hands of those men who have given a life-long study to the subject. Our colleges will then fill up and our strength will increase.

B. G. CLARKE, M. D.: Just a word along the line mentioned by Dr. Austin, that is, gaining the confidence of the student. The teacher must have confidence in himself before he can expect to have the confidence of the student. We should try to impress the student what work the drug will do, and to know what the indications are for the drug. I remember when my professor of materia medica in the old school came to the action of a remedy, he would say, "I know that will do so and so. You can rely upon it." I knew he was selecting a remedy on the law of similars, and he impressed me with the idea that the remedies he could rely upon were reliable.

C. H. EVANS, M. D.: I think that when a teacher of materia medica is enthusiastic himself in the knowledge of his subject he will make earnest students and will send out good and reliable homœopathic practitioners. A good deal has been said at one time and another as to the responsibility of the teacher of this subject, and to a great extent this is true. The teacher of materia medica is the college. All the collateral branches represented by the other chairs are alike in their instruction and methods in the various schools of medicine, regular, irregular and defective, and therefore, we have no reason to believe that students come to our colleges above all others than for the additional instruction in materia medica they will receive.

To-day we have learned many things from each other in methods of teaching, but one or two have declared against the schematic arrangement of our remedies. Now, while a literal adherence to it, for teaching purposes, is not to be recommended, it is to be remembred that it is our treasury of drug effects arranged in the most accessible form. We must have it. It is the dictionary of our materia medica and it affords us a ready reference. As has been well said

this afternoon, repetition is absolutely necessary to keep drug knowledge in our minds. Also, drugs should be taught in groups; it is easier to impress drug facts upon the student's mind when he is taught that several drugs act a good deal like one another. Considering such drugs, showing what they have in common and what their differences are, is of great value when they are being taught.

It must also be remembered that we are not teaching the whole of a drug, but are instructing the student how he is to study the materia medica. The teaching must be so conducted that the rest of his knowledge can be built upon it. When a sufficient amount of this is impressed upon his mind he may be depended upon to increase his store of learning in this direction.

In regard to the so-called characteristics, or key-notes, it was thought at one time that if the student memorized the characteristic symptoms, say half a dozen of each one, he might depend on them for a prescription, and that the remainder of the symptomatology in the materia medica and in the patient would be found associated with these. Now, while these characteristics are noteworthy, their value is only relative. Every one of these characteristics supposed to be peculiar to a certain drug can be found in the symptomatology of other drugs. Besides this, it is of frequent occurrence that a patient presents two or even three symptoms characteristic of as many different drugs. Reference to the materia medica will often show all of these symptoms associated under a drug other than the ones possibly indicated.

Another subject to consider is that while the symptomatology of a drug is being taught, the pathology, as near as is known, should receive mention, for no symptom presents itself without a corresponding anatomical change. I doubt very much if there is such a thing as a purely functional symptom. They are all of organic origin in some degree.

A. D. Young, M. D.: One point has not been touched upon, and that is, that all the colleges teach too much. The man never will live that can learn it all. I know when I was a student I picked up sulphur and was discouraged at the mass of stuff I found about it. I believe the best way for a student is to learn the skeleton of a remedy, that is, the keynotes of the remedy, and remember that. I have seen teachers teach in that way, and I have in mind characteristics which I have never forgotten, because they were given to me in that way. There was no attempt to go into the extensive symptomatology, but simply the characteristics. I really believe that the reason we have so many failures is that students try to learn so much they forget the whole thing, and so when they come to prescribe for patients they prescribe four or five remedies.

I believe if we are going to get results we will have to stick to the single remedy. Another thing, if we are going to learn materia medica, why learn a large number of symptoms that are not used? I have been thinking about this for a year or more, trying to figure how we could get at a more scientific use of our drugs. Why should we keep right on studying this materia medica when we know certain parts of it are wrong? Why delay this matter? I am heartily in favor of taking this matter right up, not waiting until someone comes along with a large endowment. I should be in favor of having a committee to investigate and see how expensive it would be to have such an institute of drug proving as has been described in Dr. Bellows' paper. It seems to me that it would be one of the best investments we could make, to establish an institute of drug proving, and get reliable, thorough and complete provings of our drugs, thus giving to the student and physician a trustworthy materia medica and therapeutic guide.

THE FUTURE OF DRUG-PROVING IN THE LIGHT OF THE TEST PROVING OF THE OPHTHALMOLOGICAL, OTOLOGICAL AND LARYNGOLOGICAL SOCIETY

HOWARD P. BELLOWS, M. S., M. D.
BOSTON, MASS.

The test drug-proving inaugurated by the American Homœopathic Ophthalmological, Otological and Laryngological Society is concluded. Three years have been occupied in this work. In eleven different cities proving boards, organized for this express purpose, have completed their task and have forwarded to this city the records of tests made by the administration of one and the same drug to fifty-one provers, both male and female. These records are inscribed in over five hundred separate record-books, consisting of bound sheets of printed forms, filled in, day by day, by various examiners representing all the specialties in medicine, and in manuscript reports of each proving as a whole by the directors of the different boards. All this material must pass under the eye of the general director of this proving and be published in book form, after being collated and classified and reduced to its ultimate constituents so as to be serviceable alike for study and for practical application. Only upon the competion of this supplementary task can the true value of this proving be apparent or the real points of difference between this and our former provings be brought clearly into view. Upon the contents of the forthcoming book the judgment of the medical professors will be based, and until its appearance any final judgment must be held in abeyance.

In the meantime, however, the proving in some of its aspects can already be brought under consideration and free discussion. We have been applying a double test in the work which we have carried forward. We have at the same time been testing a *drug* and testing a *method* of drug-proving. The former part of the work relates to the development of all the symptoms which can be produced by the administration of a single drug and ends in the record of the pathogenetic effects of the drug's action. The second part of the work is of larger scope. It concerns the whole method of procedure in obtaining drug effects and, looking beyond the records of any single drug, it opens up the whole vast question of the re-proving of our homeopathic materia medica and the manner in which this can best be accomplished. Of the individual drug which we have proved I will say no more, interesting as the subject is, but will turn to the larger aspect of our work. To this I beg your attention.

The distinctive features of the scheme upon which we have been working may be enumerated as follows: The removal of the work of drug-proving from the hands of any single individual and vesting it in a specially constituted board of physicians, representing all the medical specialties, with laboratory analysts, and presided over by one director. The use of an assayed drug. The employment of paid provers. The thorough examination of these provers by the director and specialists, both previous to the administration of the drug and upon the conclusion of the proving. The daily examination and questioning of the provers by the director, and the daily adjustment of the dosage. The regular routine examination of the provers by the specialists during the continuance of the proving, whether subjective symptoms have been noted by the provers or not. The verification or explication by the specialists of any symptoms of special or doubtful import which may be observed by the local directors. The use of printed forms for recording symptoms by the special examiners and the analysts. The preparation of a general summary of each proving by the local directors before the records are forwarded to the general director. The concerted action of all the boards under the instructions of one general director. The defraying of all general expenses of the proving from funds placed in the hands of the general director and the exclusive use of funds raised in different localities by the local boards under the expenditure of the local directors.

Let us briefly take up these various points and see how they have stood the test of three years' experience. The greater efficiency of the proving board as compared with the individual in conducting provings does not admit of a moment's doubt. No one man in these modern times can compass the knowledge of the medical profession as a whole, and without such breadth and diversity of knowledge much of value in every proving is inevitably lost. Not only division of labor, but vastly increased discernment and accuracy in observation is secured by the concerted work of a proving board. Experience has shown, however, that the number of physicians constituting such a board can with practical advantage be rather lessened than increased over the number originally proposed. If any locality, for instance, is fortunate enough to possess one man equally competent to examine the eye and the ear—or the ear, the nose and the throat—the practical efficiency of the board will be increased by having one examainer do the work of two, provided, of course, that the work is equally well done. It has been demonstrated that it was a wise course and one conducing to harmonious action for the local directors to be first chosen in each city and to rest in their hands the appointing of the various members

upon the boards, rather than to choose the members of the boards and have them appoint their directors.

The wisdom of using only a previously assayed drug, the absolute purity and exact strength of which is determined, is self evident. The employment of paid provers has been characteristic of this test-proving and has been advocated wherever possible. The services of volunteer provers have been accepted in some places, however, those provers being, for the most part, medical students. Such volunteer provings in many instances were abandoned as soon as the preliminary examinations were finished, or after two or three days of routine work. Many sets of printed forms have been ruined to no purpose and little but disappointment, as a rule, has resulted from dependence upon this class of provers. In a few praiseworthy instances such provings have been carried through to a finish, but when that is the case the difference in the quality between these and provings made with paid provers is apparent at a glance. An equal degree of regularity and punctuality in the visits to the special examiners is never attained in the volunteer provings. Even though the payment which is received is small, it carries with it the sense of a contract which has been entered into and a daily obligation which must be fulfilled. This doubtless explains the greater regularity and persistency of the paid prover. It was claimed in the most explicit terms at the beginning of this undertaking that no student could possibly find time to carry out a proving in a proper manner while he was in attendance upon lectures and engaged in the routine of college work. The truth of this claim is absolutely demonstrated by the result of these test provings. The only college in which students have carried through provings which compare favorably in any way with those of paid provers is one in which, during the continuance of the provings, certain college exercises of the students so engaged were suspended. I believe that such is the only possible course to pursue if students in medical colleges are to make satisfactory provings. Either the work must be done by them in vacation time, in the autumn preceding the opening of college courses, or in the three weeks immediately following commencement in spring, or else the proving must be made the regular part of the college curriculum, say in the senior year, and supercede all, or nearly all, other class exercises during its continuance. Further than this, in order to attain the best possible success, it would be necessary to make it a requisite for graduation that, during his course of study, each student should satisfactorily complete at least one proving, unless he is excused from this, for just cause, by the faculty or executive committee of his college.

As to the thorough preliminary and final examination of the provers by the director and the special examiners nothing need be said—its necessity in a scientific proving is apparent. A tendency on the part of both provers and examiners to neglect or slight a final examination is shown, however, in the practical outcome of our tests. The daily examination of the provers by the director, the record of weather conditions, and the daily adjustment of the dose are features of the proving which require no comment, as the advantages resulting are perfectly evident. The wisdom of the regular routine examination of the provers by the specialists during the continuance of the proving, whether subjective symptoms have been noted by the provers or not, has been called in question on account of the amount of time and the increased labor which it requires. My only answer is an appeal to actual experience. Both subjective and objective symptoms of great practical importance have been recorded in this test-proving by the special examiners when no hints or suggestions of any such conditions are to be found under the same dates in the records of either the prover himself or the local director. Without the specialist's routine examinations these facts, of such value to specialists and so distinctive and characteristic of our new and more exact scientific method of proving, would have been absolutely lost. This feature of the new proving scheme, which more than any other single feature distinguishes it from the older methods, should not be condemned, therefore, but should be preserved and developed in the future, while a way is sought in which the same results can be obtained, if possible, with less expenditure of time and labor than has been required in our test-proving.

Let us proceed rapidly with the remaining points to be covered in the review of our practical experience with this proving scheme. The provision for the verification of explication by the specialists of special symptoms, which were observed by the local directors, worked admirably when it was followed. It is most gratifying and satisfactory when the director's record for the day mentions the appearance of an eruption, for instance, to turn to the records of the skin specialists for the same day and find the exact nature of the eruption expressed in explicit and scientific terms. It is correspondingly disappointing in some other proving, to find the simple record by the director, "An eruption appeared to-day on the skin" and find on the part of the skin specialist no entry of any sort whatever—probably because the prover, perhaps an over-worked student, never went to him at all for the examination in question, or failed to find him when the call was made. So the new proving in this instance remains as meaningless and valueless as the older provings, upon which we are endeavoring to improve,

The fault is not with the method, but with the failure to carry it out. The method should be continued in the future, but the recurrence of such failures in its application should be guarded against.

The use of printed forms by the special examiners and analysts in making their records has been shown to be an essential feature of the new scheme and to work admirably in securing thoroughness of inspection, uniformity in the daily records and working basis for the proper comparison and grouping and final recording of the symptoms observed. In our test-proving these examiners' forms were made as comprehensive as possible, with the idea that their practical use would show in the best possible manner, what parts could be dispensed with in the future, or abridged, without loss of accuracy or of any useful details in our final records of a drug's pathogenic action. It is expected, therefore, that these printed forms will be simplified and condensed in the future in such ways as may be indicated by the practical tests to which they have been subjected, and will not preserve the bulky and somewhat formidable aspect which they at present possess.

The preparation of a general summary of each proving by the local directors, before the various records are forwarded to the general director, has proved a veritable thorn in the flesh to almost every local director upon our list. To prepare such a summary a man should have at his disposal sufficient time to sit down with a clear head, and every examiner's record conveniently outspread before him and devote himself to this task and this alone, without interruption, until the proving upon which he is engaged is reviewed, day by day, in all its aspects, and the final narrative written in an orderly sequence of days and events from beginning to end. What man in the active practice of the medical profession can obtain either the requisite time or the necessary seclusion and concentration of mind and energy to do this as it should be done? The result has been a waiting from day to day, from week to week, and, in some instances, from month to month, in the hope that some opportunity more favorable than the present would eventually be found. This has proved to be the greatest source of delay in the completion of our proving, and the responsibility does not attach to any one director alone—in fact, scarcely more to one than to another. This is a part of our scheme which needs revision if the records of future provings are to be brought to prompt completion. One man, with time sufficient, and with proper bent of mind for this part of the work, should, so far as possible, assume the summarizing and condensing and editing of all these diverse records. Then, and not till then, will this most difficult part of the task be executed with equal thoroughness and despatch.

The concerted action of all the various boards in our test-proving has been its main source of strength and any plan for future work which lacks the re-proving of our materia medica as a whole, and not simply to desultory work upon its individual parts, should have as its keystone the principle of organized co-operation and a central direction of the whole movement. The plan of defraying all the general expenses of the proving from a fund created for that purpose and leaving to each local board the unrestricted expenditure of all funds raised in its own locality has worked to the absolute satisfaction of everybody concerned, and requires no comment, bearing, as it does, mainly upon the past.

And now what for the future? I have assumed that the forthcoming book will demonstrate that we are upon the right track as regards the general method of future drug-proving. I believe that the scheme which we are pursuing, with the modifications which have been suggested and those which further experience will indicate, will yield most definite and satisfactory results and meet every demand of modern science. Though somewhat laborious in its application this method will provide for us provings which, as the study of each drug is completed, will stand without revision for years to come and may, indeed, be regarded as a finality, a permanency, so far as they go, requiring only addition and not correction in the future. But how are we to proceed in the application of this method. Are we to follow the working-plan which we have thus far pursued and seek to establish each of the local boards in our various cities and educational centers upon a permanent basis and add to their number as such additions become possible? Are we to continue this work under the auspices of the Ophthalmological, Otological and Laryngological Society, which has conducted it thus far? Are we, perhaps, instead of this, to seek for this movement henceforth a larger and more influential support than can be afforded by that or by any specialists' society and continue to work upon the same general plan under the auspices of this American Institute of Homœopathy? It may occasion surprise when I state my individual judgment, founded upon three years of experience as the general director of this movement, that the further pursuit of the plan which we have followed, so far as it relates to the systematic re-proving of our materia medica, whether this plan be continued under the auspices of the O., O. and L. Society or under that of this American Institute is impracticable and in the end will prove utterly futile. Do not think me disheartened or discouraged. While this adverse opinion is founded upon my personal experience I am to-day more sanguine in regard to the ultimate success of this movement than when I entered upon the

work three years ago. The reason why I do not advocate the continued following of the plan for proving by means of the local boards as now constituted is because, in its practical application, this plan has been found to bear too heavily upon the busy practitioner. Any man who is competent to act as an examiner in accordance with this scheme is a man who has thus qualified himself by long experience in medical practice and such men are, in a measure, no longer masters of their time. We have in many instances secured the regular attendance of the provers upon the examiner, but to secure the regular presence of the examiner in his office at the time of the prover's call, or for him to so arrange his time and engagements that he can promptly examine the prover upon his arrival, is a vastly more difficult problem, as our experience has conclusively shown. Let us give all due credit to these many physicians, mostly specialists, who have succeeded in carrying through fifty-one provings in order to demonstrate how such work should be done. Let us give due credit to the eleven local directors who have shouldered through their part of the task, standing between provers and examiners, and have grappled with the examiners' records and their own, through weeks of broken time, in the effort to bring the various parts into proper relation with each other and prevent each proving as a concrete unit. But, after giving all due credit and making all just allowance, the facts remain that, with the very best efforts which could be put forth, it has required a year and a half of valuable time, after everything was in perfect readiness, to bring the work upon one drug by fifty-two provers to its present stage, and that, even now, many records of examinations are either wholly wanting or are far from satisfactory. This is a loss of time and a waste of material which surely cannot be contemplated for the future. Re-proving our materia medica at this rate is simply working for posterity and scarcely for ourselves at all. It is not probable that continued experience with our present plan will sufficiently correct its faults in this regard, and, therefore, I advocate its abandonment in favor of some modified plan which bears less heavily upon special examiners and local directors.

Provings made by students in medical colleges as a part of the course required for graduation would be an exceedingly valuable means of instruction to them and would produce results good as far as they go, but inadequate to the demand for an exhaustive re-proving which is laid upon us. Unless one common drug were chosen for provings in all the colleges, until a sufficient amount of material is accumulated before another is taken up, the results would be scattering and desultory, and even then a uniform mode of procedure in all the colleges would

have to be adopted and the final results be edited from a common center before the work accomplished upon any drug could be considered in any sense complete. Would it be possible to secure such uniformity and agreement between rival educational institutions—even when the rivalry is entirely friendly? Would not each professor of materia medica prefer so strongly his own mode of procedure in this or that particular that uniformity would be wellnigh impossible? And would not insistance upon the work of proving as requisite to graduation deter a timid student from studying in a homœopathic college at all, or influence him to choose some college of our school where proving is either not required, or where it is known to be easy to secure an excuse from the faculty? The imagination of prospective medical students is sometimes very impressionable, and the fears of fathers and fond mothers easily aroused. The final choice even between a so-called "regular" college and one of the homœopathic school is often determined by some consideration less weighty than this. Yet we have seen that where thorough work in proving is required volunteer student provers are practically a failure. Provings by students on any system of merits can only be arranged in vacation time and then the college professors, who act as examiners, are often absent and their services unavailable. If done with any real prospect of success, therefore, it must be made a requisite for graduation. If, however, this is not done by all our colleges alike, or if compliance with this requirement is less rigidly enforced in one college than in another, it carries an unfair advantage so far as the enrollment of students is concerned. Can all our colleges be brought to take and to maintain uniform action in this regard? The whole plan for re-proving our materia medica by means of college provings turns, therefore, for its success upon the idea of *uniformity,* and, as between medical colleges, what is more hopeless of attainment. If, for lack of better resources, we are forced back upon our colleges and our college students to bear the brunt of the work of drug-proving, for a few years at least, there is ample scope for our intercollegiate committee to exercise its function here and to evolve a common working plan which can be entered upon in hearty accord by all the institutions which this committee represents. It is my belief, however, that the full fruition of our hopes and desires as regards systematic re-proving will not be realized from the work of our colleges.

Having dwelt sufficiently long upon the negative side of this question, and stated pretty explicitly what our test-proving has taught us should not be done in the future, let me now turn to the positive side and state, as clearly as I can, what, in my view, our future course

should be in the advancement of this work of drug-proving if, by any means, we can attain its realization. To my mind there is only one way in which further drug-proving can be done as it should be done to meet the demands of modern times, and that is in an institution founded and equipped for this purpose. What we need now, and what we must have sooner or later, if this work of re-proving our materia medica is to go on to successful completion, is an Institute of Drug Proving. Until we do have such an institution the best work which can be done by individuals, or by proving boards, or by colleges, will prove inadequate to the requirements which modern methods in other lines of research lay upon us. In my judgment we might almost better conserve our energy and concentrate our forces, so far as systematic re-proving is concerned, until such time as an Institute of Drug Proving is within our reach, rather than struggle with the problem and make ineffectual efforts to accomplish the wellnigh impossible with the means now at our command. Let us go into particulars and see just what the establishment of such an institution implies. In the first place it is not at all necessary that a fine building be erected for the purpose, although the cause is worthy even of that. A medium-sized private house, upon some quiet and unfashionable side street, could be rented or purchased and would serve the purpose well, provided it be conveniently accessible by main lines of city travel, and be near some large hospital or dispensary or medical college which constitutes a medical center. It goes without saying that the home of such an institution should be in one of our larger cities, where there is a medical college of our school and large public or medical libraries available for research, and a city in which the homœopathic profession is strongly represented. The house which is chosen for the use of the institute should be re-fitted so as to contain a large library or working room, a small and private director's room, a waiting room for provers or visitors, three or four examining rooms, fitted with all instruments and appliances necessary for the convenient use of the various special examiners, so that three or four can be working at the same time, a well equipped laboratory for the analyst and bacteriologist, and quarters for a janitor. The working room should contain all the time-saving appliances—a telephone, typewriter, mimeograph, letter-press, filing cabinets, a large safe for the protection of manuscripts and records, and an extensive reference library. This library should comprise all the standard works upon materia medica, toxicology and pharmacology in both schools of medicine, a standard medical dictionary and encyclopædia, the Index Medicus, from the first volume to the time of its discontinuance, and the new issue now being undertaken by the Carnegie Institution, the Biblio-

graphia Medica, published in Paris, and the various indexes to medical publications issued by periodicals like the Medical Review of Reviews, our Homœopathic Journal of Ophthalmology, Otology and Laryngology, etc., during the discontinuance of the Index Medicus, and, lastly, there should be on the shelves of the library for convenient reference complete sets of the transactions of all our State and other societies which publish such, and, so far as possible, a complete file of every homœopathic periodical which is published, or has been published, in the English, French and German languages. Probably many of these sets and files would be gladly supplied by the societies and the publishers and editors of the various periodicals, or would be donated by physicians having them in their possession—the particular sets or numbers needed being made known by an appeal through the columns of our medical press. Loose periodicals should be serviceably bound in canvas or buckram, or arranged in substantial cases, so as to bear the handling to which they will be subjected for years to come in the practical work of the institution. An important adjunct of the office fittings should be a small card catalogue, which should show at all times the names and addresses and qualifications of persons available for employment as provers. There is opportunity for much personal tact and the exercise of personal influence in obtaining these names and the consent of prospective provers to act in such capacity. To obtain the names alone is likely to require frequent personal conferences with physicians in their offices and at dispensaries, with college professors and instructors with reference to the employment of students during vacation seasons, with the superintendents of various charitable institutions, with people engaged in so-called "settlement work" among the intelligent poor of the city, and with any others suggested by necessity or opportunity. All practical results of these conferences and subsequent ones with the candidates themselves will appear in the card catalogue of available provers, which will require constant revision.

So much for the house and its fittings, now for the personnel of the proposed institute. In charge of the entire institution and its work should be a general director. At the house in constant attendance during working hours the director should have an efficient office assistant who understands stenography and typewriting and can do proofreading and have a knowledge and control of many small details which commonly need not occupy a director's time and thought. The whole building should be in charge of a janitor, and this is the entire force whose daily attendance is necessary. At times work might be assigned by the director to two or three extra helpers, medical students or recently graduated physicians, in looking up wide-spread records of provings

and poisonings and submitting these to the director for the preparation of abstracts when the work upon a particular drug is being edited. The remainder of the personnel of the institute consists of the special examiners and the analysts, in accordance with the working scheme which we have just tested and found worthy of adoption with slight modifications. These special examiners and analysts should be in regular routine attendance at stated hours on stated days during the period of active work upon each drug—the whole class of provers being present at the institute for examination at the specified times, following each other from room to room until the observations of the day are finished, the provers thus rounding up for the examiners at the institute instead of scattering over the city to seek them at their several offices. The examiners, on their part, upon these days make a professional call at the institute, by appointment, where their examining room and special apparatus is in readiness for them, and despatch the work promptly without any interference with private practice or confliction with private patients. Each examiner and analyst should have an understudy, a younger man who can be called upon by the examiner, or from the office, to do the required work when unavoidable detention occurs. In this way regularity in the observations can be insured—the lack of this regularity being the fault which chiefly marred our test-proving and robbed it of its best results. All these physicians who make up the personnel of the Institute for Drug Proving, as well as the provers who are employed in the work, should, in my judgment, receive payment for their services, and here lies the chief expense of such an institution. The director must give practically his whole time and his whole strength to the undertaking. To be fitted for the position he must either be a general practitioner of large experience, or if a specialist, he must have had ample experience in general medicine previous to his special work. The continuance of general practice would be utterly out of the question, however, for the general director of an Institute of Drug Proving, and, if he were a specialist, it would at best be possible to see only a few patients each day by special appointment, probably at times when he was already fatigued by the work of the day at the institute. It is very doubtful if the fees thus earned would much more than pay a specialist's heavy expense for office and equipment, or if the practice so accomplished would be anything but a source of dissatisfaction to any conscientious physician. In fact, with the best salary which could be expected in such an institution the man chosen for the directorship would be called upon to exercise self-renunciation, so far as financial matters are concerned, in accepting the proffered position, because any man fitted by professional experience to fill the director's position is

capable of earning far more money in the practice of his profession than such a directorship can possibly yield in its salary. It goes without comment that the office assistant and janitor should be salaried. The occasional work of the assistant in searching for scattered records of previous provings and cases of poisoning can be paid by the hour. The special examiners should receive professional fees for their visits actually made to the institution for the purpose of examining the class of provers, so much per visit, and if their understudies make the visit for them the understudy should receive the fee. The analysts should also be properly compensated for the time which they spend working in the laboratories of the institution. All this, together with the payment of the provers, means much expense. It would almost seem to preclude the development of the scheme. Until such time as the expense can be afforded, however, we might as well suspend our expectation of any adequate, systematic re-proving of our materia medica, for no work which we can accomplish under less favorable conditions can be regarded as final—it must all be gone over again in future, drug by drug, almost as though it had never been done at all.

An institute, to possess and administer the means which this requires, should be incorporated. This must, of course, be done in the State which is chosen for its location. Incorporation means a board of trustees—men who stand so high in the public estimation throughout the country that their very names guarantee the solidity and success and scientific character of the institution under administration, together with men of such experience with financial trusts in the community in which the institute is located that the permanence and wise investment of its funds is assured. I would propose, therefore, that to meet this demand, should such an Institute of Drug Proving be established, the American Institute of Homœopathy, through its executive committee, appoint a board of fifteen trustees, ten of which shall be physicians prominent in the membership of the institute and five of them men prominent in business in the city chosen for the proving center. Three trustees (two physicians and one business man) shall be appointed for one year's service, three for two years, three for three years, three for four years and three for five years. Subsequently, each year, the executive committee of the American Institute shall fill the three places regularly becoming vacant upon the board of Institute of Drug Proving and any other vacancies which, from any mishap, may from time to time occur.

To this board of trustees may be entrusted any funds with which an Institute of Drug Proving may be endowed permanently; any funds which are to yield their interest for a stated number of years for

the use of the institute, with reversion of the principal at the end of the specified time to some institution or object or to the heirs of the donor, as may be designated; the income of funds similarly entailed, but resting in the interim in the keeping of trust companies; or current funds for expenditure, either principal or interest, at the discretion of the trustees. The expenses of such an institution would be much greater in the earlier years of its existence than later on, for the reason that every drug which is well proven lessens the task which devolves upon the institute and when the materia medica is well gone over, years hence, the new drugs to be tested will require comparatively little time. In the next twenty years or so the work should be pushed to its utmost, however, until we have re-proved all our polychrests and most commonly used remedies. It is to be hoped, therefore, if such an institution be established, that the funds at the command of the trustees will more than suffice for the running expenses of a central Institute of Drug Proving and that the surplus of these funds, or the income of funds contributed for that purpose in different cities, may be devoted to the establishment of branches of the Institute of Drug Proving in these several cities. To secure harmony in work and uniformity in result these branches should be under the general administration of the board of trustees of the central institution. The local directors of the several branches, as well as the general director of the central institution, should be appointed, or re-appointed, annually, by this board of trustees —but all other appointments upon the several boards should be left entirely to the director of each, together with all matters of their routine administration and governance. In matters relating to the proving itself, the local directors should be under the instruction of the general director, receiving the remedy to be proven and all general directions concerning the work of proving from him. The choice of the remedies to be proven and the general conduct of the institution in all particulars, so far as its practical work is concerned, should rest with the general director. The local directors should annually report to the general director, the general director to the board of trustees and the trustees make an annual report to the Institute of Homœopathy. Thus the coherence of all parts of the work is secured and all progress is upon a definite plan. The work of the local branches, if such can be established, is much simpler than that of the central institute and far less expensive, since it will only be necessary for the local director to secure from his provings, with the co-operation of his examiners, a record of the results individually obtained and forward these records to the central institute without any attempt to summarize or collaborate them. This does away with the greatest source of delay in our test-

proving—the summarizing by the local directors. All editing and all publication is thus done at the central institute and the reference library and all the expensive paraphernalia of office work, once provided, serves for the use of all the branches without additional expense. The local board's only work, therefore, when a drug is being actually proven by them—but work upon the results obtained goes on without ceasing, except perhaps for summer vacations, at the central institute. Should any of our colleges make provings a required part of their curriculum the drugs thus proven should be the same as those chosen for the local branches of the institute, if indeed the colleges be not themselves the local branches, and the result being forwarded to the central institute can be incorporated in its publications, and come into the general scheme as a very useful and harmonious part.

It is an interesting question in relation to the work of such an institute whether the drugs selected for proving should be in all respects the same as those which we have commonly been using in our homeopathic practice, or whether, for the sake of simplicity and scientific accuracy, we should not make greater use than heretofore of alkaloids. Some of our polychrests owe their medicinal properties to more than one alkaloid which they contain. In our day such polychrests have become as much medicinal compounds as some of the mixtures which Hahnemann inveighed against when striving for purity and simplicity in our materia medica. To be sure these remedies are compounded in nature's laboratory and not in that of the chemist—but the chemist's laboratory now resolves for us these compounds of nature into their component parts, if we wish to employ them in their simplicity. Probably his question can only be settled satisfactorily by proving a polychrest in our modern fashion, then proving each of its constituent alkaloid elements in similar manner, and making an exhaustive study and comparison of the results thus obtained with a view to their practical application in the practice of medicine.

And now more particularly in regard to the publishing work of an Institute of Drug Proving. When the records of new provings are at hand, whether made at the central institute or sent in from any of its branches, the first work in editing should be to reduce each individual proving to the form of a concise but comprehensive narrative, showing all drug effects and related conditions in orderly sequence from day to day. Then there should be collected, from all sources, every well authenticated proving of the same drug which can be similarly stated in narrative form—the narrative being the only satisfactory and truly scientific basis for the study of drug action. The Cyclopaedia of Drug Pathogenesy is already a storehouse of such records and should be in-

corporated in the new materia medica practically in its entirety. Next should be gathered together all well authenticated narratives of poisonings by the drug which is being studied, and in this connection records of post-mortem observations would be of special value and importance. One of the results of our test-proving is to show us how largely our previous knowledge of drug pathogenesy has been drawn from the effects of poisonings, as distinguished from the milder effects produced by provings, properly so-called. Lastly, as casting an important side-light upon the drug's sphere of action, all narratives of its effects upon animals and animal organs and tissues should be collected, but these should always be kept clearly distinct from effects produced upon the human organism and never incorporated or allowed to be confounded with them. All these narratives, made as concise as possible and shorn of redundancies, should be published as they stand and, in addition to this, for quicker study and reference and practical service in prescribing, there should be published a carefully constructed scheme in the time-honored form. This should contain no symptoms, but, first, those isolated symptoms vouched for by Hahnemann personally and distinctly so designated by some printed sign; second, symptoms derived from the preceding narratives of provings, showing distinctly the relative frequency of their occurrence, and, if possible, affording a key to their grouping; third, symptoms derived from the preceding narratives of poisonings, these being properly designated by a printed sign and, fourth, parenthetical allusion *to* effects developed in animal organs and tissues, distinctly set off from all symptoms foregoing. Books constructed upon this plan should be published by the Institute of Drug Proving in uniform size and binding, from time to time, as material permits, it being hoped that there would be at least one annual volume, and these books, especially if the institute be endowed, should be furnished to the profession as nearly as possible at cost price.

And now, in closing, let us put fairly the question: Is this whole scheme Utopian? Is it merely visionary or at best only prophetic? Let us frankly acknowledge that it may be slow of realization; that before it is attained we may even be forced to modify the plan here presented and deliberately cut our pattern to fit our cloth, but let us recognize that, in so doing we are adopting half-measures and working for partial results. Let us not deceive ourselves by thinking that the highest aim which we set before us, that is an exhaustive, systematic and strictly scientific re-proving of our materia medica, can ever be accomplished by any means less thorough than by institution work. In projecting a scheme of this magnitude and in working for an end so inspiring and of such momentous importance why should not our first

aim, at least, be high? Why should we not set clearly before the mind the ideal course to pursue and follow it if we can. When we know that our aim must be lowered it will be time to devise substitute plans which we may regard as temporary expedients. The coming year is one for deliberation, for no final action can well be taken until the results of our test-proving are published and thrown open to scrutiny and criticism. During this year let us not think any aim too high which most surely and directly leads to the accomplishment of our object. And after all, is it presumptuous? Is it merely visionary? In the contrary, is it not both reasonable and in conformity with experience in other lines of research, in these days when the Government itself is conducting costly experiments to prove the effects of food adulterants upon the healthy human system—in these days of the Carnegie Institution and the Rockefeller Institute for Medical Research with their princely endowments —is it not both reasonable and in conformity with the experience of other earnest workers in the field of science to believe that some large-hearted and broad-minded man, blessed with ample means at his command, and appreciating the grand opportunity here presented for the advancement of medical science, the promotion of medical unity and the betterment of humanity through more accurate and dependable therapeutical resources, will come forward, sooner or later, before many years have passed, and will endow an Institute for Drug Proving which will place upon a permanent basis and establish in its true position the most reliable and the most beneficent means of healing the sick which rests in the hands of the medical profession—the homœopathic materia medica.

DISCUSSION.

CHARLES MOHR, M. D.: I am fully in accord with everything which he has said in Dr. Bellows' excellent paper. In 1895 I organized a pharmacological society for the same purpose, to work along the same lines which he has portrayed. We devoted eight whole months to the proving of one drug, and it was a very discouraging task, for it was hard to enlist the interest of the profession. If we ever succeed in proving drugs satisfactorily to the profession of medicine, we will have to do precisely what Dr. Bellows suggests in his paper, and that means above everything else, money to endow an institute of provings. But there is something we can do before an Institute of Provers is established, and that is, to make such provings as we can along the lines suggested by Dr. Bellows. I want to suggest that instead of re-proving our polychrests it might be well to take an alkaloid of our polychrests, and prove that thoroughly, and if a plant contains more than one alkaloid, take that and prove it in the same manner. I suggest this because

of the fact that the treatment of patients with alkaloid on the supposition that the principal alkaloid represents the action of the plant, is a common occurrence, and in my judgment is bad practice.

Another point: I do not look upon medical students as the best provers, by any means. In the first place, their environment is unfavorable. In the second place, they have but a smattering or superficial knowledge of medicine, and unless they are very carefully watched, they may put down symptoms that may mislead one who does not know the facts, but depends upon the proving as it may be recited. I believe the best provers are men, women and children who are intelligent, who are educated enough to express themselves in intelligible words, and are able to describe their feelings or subjective symptoms in words such as are commonly used by patients.

Now, I have often thought, and I have called attention to this in several society meetings, that our specialists could do us some good by studying the polychrests, and other very important drugs proved by Hahnemann, as well as by Hering, and when they have an eye, ear, throat or chest disease to treat, they might take into consideration the symptoms which would prompt them to give the remedy on homœopathic principles, and make a thorough examination of the organs to be treated in order to get the objective appearances to see if there is any co-relation between the subjective symptoms, and the structural changes. Now, I believe if that were done by all the specialists in the homœopathic school, it would be found that a great many special diseases that are treated by the ordinary methods of the specialists of the old school, would be cured under the action of the selected homœopathic remedy.

H. H. Baxter, M. D.: This discussion recalls the story of a celebrated chemist. He was called upon by a contemporary who expected to see a large laboratory, equipped with all modern appliances. He was surprised at being ushered into a small room, containing a few pans, test-tubes, bottles and other furnishings of a very meager order, but with this simple apparatus he had made for himself a world-wide reputation. I think we may apply this lesson here. Without waiting for an endowment to establish an elaborate college of provings we can begin in a small way, with such means as can be commanded. Such institutions grow from small beginnings, and I fear that if we wait for an endowment the work will be suspended indefinitely. Let us carry on provings with what advantages we have until the efforts can be concentrated into a central institution. I believe much can be done if we make proper use of the means we have.

In regard to teaching: On the chart before us we have the pre-

ceptor first, next the professor, and finally the practitioner. One factor is seldom mentioned in these annual criticisms and discussions, and that factor is the student. As much depends upon him as upon the teacher, if not more. It is a fact, and I think all teachers will agree with me, that this is the hardest subject to teach of any in the medical course. There is a fascination about all other subjects that materia medica does not command. One thing that should be impressed upon the student from the first, is that there is no royal road to knowledge of materia medica. He must be impressed with the idea that he must do the work for the work's sake. Those of us who have been in practice a number of years, and we do not have to be in practice long to find it out, know that the most important subject is materia medica, and that upon it depends the physician's success. The student must be made to realize this before he will take hold of it with the interest and vigor he should. The trouble lies, many times, not with the professor or preceptor, but with the student.

I am a firm believer in repetition. I do not believe it is possible for a student to grasp all the points in going over the subject once. Some will escape his attention or memory. I believe the teacher should go over the subject with the student over and over again, until it is hammered in so that it will stay.

Symptomatology is a stumbling block to students sometimes. It does not do to merely memorize. That is necessary, but it is not all. He should be taught what symptoms mean. When possible, teach him to reason them out for himself. Trace the symptoms back to their cause. Begin with the sphere of action of a drug. Impress upon him the organs and tissues that are affected by the drug, and the character of its action, and this, many times, will enable him to understand the symptoms which follow. Let him bring logic to bear upon the subject whenever possible.

Edward P. Colby, M. D.: When you requested me to discuss the paper of Dr. Bellows I had not seen it or known anything of its character. Had I done so I doubt if I should have been willing to discuss it. I am not prepared to discuss such an imperial scheme. It is a subject which would require much time before being prepared to discuss it at all. I had prepared a few headings bearing upon my experience and impressions as local director in the series of drug provings which is just terminating, but really the nature of the paper which I was to discuss seems to throw this more or less out of court, and I hardly know where I am placed, so I think I had better be seated.

WHAT EXPERIENCE HAS TAUGHT IN DOSE REPETITION

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The question of repetition of the dose was one that engaged the attention of Hahnemann at an early period and from the record we are led to believe that he changed his views of the subject quite as often as he did those on potency.

He at first used doses with the same frequency as the old school did at that period, later than this he advises that the dose be not repeated until the action of the former had exhausted itself. Finally, however, his views crystallized themselves into something definite which he expressed in the Organon, paragraphs 245, 246 and 247. Here it is stated:

"Perceptible and continued progress of improvement in an acute or chronic disease is a condition, which, as long as it lasts, invariably contra-indicates the repetition of any medicine whatever." In the next paragraph he speaks of "Proper intervals, such as are proved by experience." In paragraph 247 he gives examples of intervals, speaking of from 14 to 7 days, and in acute diseases oftener, 24, 12, 8, 4 hours, and in very acute diseases from an hour to 5 minutes, varied, of course, by the remedy and the acuteness of the disease.

It is thus seen that Hahnemann's views on the repetition of the dose are practically those that are adopted by all homœopathic physicians up to the present day. A great deal of study has been spent on this question by the early writers of the school, and it has been approached from all sides. For instance, Hahnemann also at one time counseled not to repeat the same potency, and that if a repetition should be deemed necessary it should be repeated in another potency. Hering taught that remedies should be repeated often in painful diseases, that the more similar the remedy the less often it need be given, that large doses may be repeated frequently, but that small doses should be used infrequently, for instance, one could repeat the 3rd of aconite oftener than the 30th. Wolf, an early disciple of Hahnemann, did not agree with his master wholly, and believed that his advice should not be followed too implicitly; he gives a list of remedies with the most suitable time for repetition. And so, throughout the writers on early homœopathy, this question received much attention, which I think may be summed up as follows:

1.—Frequent repetition of the dose is theoretically incorrect.

2.—Clinical experience has taught the necessity of repeating the dose according to the intensity of the case, even as frequently as every five minutes, until relief is apparent.

3.—Acute diseases demand frequent repetition, and low potencies.

4.— Exhausted vitality states demand also a frequent repetition of the dose, but here the potencies should be high.

5.—Chronic diseases, as a rule, demand infrequent repetition.

6.—Certain remedies demand more frequent repetition of dose than others, as their duration of action is less. This question was fully studied by Hahnemann and others, who gave advice to vary the frequency of dose repetition according to the duration of action of the remedy. In our early materia medicas the duration of action of each remedy is carefully noted.

There are a few points on the question of dose repetition that I have learned from, or verified by, experience and to give this paper a slight practical value I will cite them. It has always been my custom in the treatment of diarrhoeas, dysenteries, summer complaints, etc., to give a dose of the medicine after each evacuation. This, I believe, was first promulgated by Hering. I have found it to work well. In spasmodic conditions, where pain is present, I have also followed this rule practically, that is to give a dose after each period of exacerbation, after each spasm of pain, thus in colic I believe a dose, say of colocynth (if indicated), will act better *after* the acute exacerbation, not as it comes on and the patient is writhing, but after it. This, I believe, will theoretically apply to other forms of spasmodic pains. I know it will apply in toothache. It should also apply in vomiting, especially, though I am not one to believe that medicines must reach the stomach to do good.

Bryonia is a remedy that I believe should not be frequently repeated. I never prescribe it oftener than every three hours. I formerly did so every hour and oftener, but found that much better results were had if less frequently repeated. In acute pleuritic attacks it may do to repeat more frequently, according to the foregoing rules, but I am convinced that it is one of the remedies that does not produce its full effect when too frequently repeated.

Belladonna, hyoscyamus and stramonium are remedies that will bear repetition more frequently according to my observation. They are generally considered short acting remedies, and this may be the reason. It has been my custom to give them every hour, or at the most every two hours.

Aconite is another short acting remedy and usually its repetition is called for frequently during the brief period in which it is indicated.

I have given aconite 3rd every fifteen minutes in the initial chilly stages of a febrile attack, and have seen a perspiration follow three or four doses, and then I usually stop the medicine.

Lycopodium does not need to be repeated frequently, but ignatia seems to act better in oft repeated doses. Its action seems short.

DISCUSSION

GEORGE ROYAL, M. D.: You know there are some remedies that have different periods of repetition. Arsenicum is as good an example as I can use. You will notice in reading over the provings of the drug's pathogenesis and separating it carefully into groups, that arsenicum acts in two different lines. There are certain conditions in which it acts upon the nerves where the process seems very rapid indeed. I was taught by St. Clair Smith of New York that arsenicum was a remedy that did not need frequent repetition. Two or three years after I had a case of gastritis. I gave arsenicum in the sixth, telling the patient to repeat once in three hours, and went back to my office. About six hours later one of the members of the family telephoned to my office and made this remark: "Mother seemed to have improved fifteen or twenty minutes after taking the medicine, and then the pain seemed to come back again." I told her to give it again in half an hour. In about three quarters of an hour the pain returned. Again the medicine was given, when the pain disappeared.

For ten or twelve years I have been at work on this subject, and a few weeks ago in speaking to our State Society I told the members that I thought I saw a principle pointing to a rule, namely: that we could go to our drug pathogenesis and take our remedies and find that remedies that brought out the symptoms promptly, quickly, were the remedies that needed frequent repetition, and those remedies which produced symptoms after a long interval needed longer repetition. When I talked that to the students you ought to have seen the expressions on their faces. It seemed to indicate too much labor. Then I went to work to see if there were not some general rule to apply by which we could get at it in another way. I believe the more I examine and compare that it is going to work out favorably. In the group of remedies which produce symptoms on the provers after a short interval you will find first of all the gases. Next to this will come the corrosive acids, and then the volatile salts. Now add to these three the vegetable group, which act directly upon the nervous system, and you will have very few remedies indeed that did not produce symptoms on the healthy individual in a very short time. Now you go to the other extreme and you will find the metals and such remedies as the

Calcareas that act upon the glandular system and the blood, and those vegetable remedies which act more on the liver and lower tissues of the body.

In regard to repetition of the dose, my rule is to stop when improvement begins, but, as you all know, you have to leave remedies, and sometimes it will be several hours or even days before you can expect improvement. If our students can understand that Lilium is a remedy from which we cannot expect results for a long time after its administration, they will know better than to change the remedy when the friend of a patient or the patient himself reports "No better." They will not change the remedy for four weeks if they have chosen carefully. Now take, for instance, belladonna, where you can see its action on the nerves which you know will result in convulsions. Hold that down! You may have to repeat it frequently. Again, when the circulation has been disturbed, when the chest seems to be filling up, and congestion seems to threaten the life of your patient, you will use veratrum viride and give it every fifteen minutes. I used to give it in drop doses every ten minutes. That is all right, if you can watch the effect yourself. Now I give veratrum viride in the first or second, give it often and keep at it.

Apis.—Is a remedy I repeat every three hours.

Apocynum.—This is a remedy that I use in only two conditions. For its diuretic effect I repeat every hour; for its hemorrhagic effect, every two hours.

Argentum Nitricum.—When used for catarrhal or purulent affections, once in three hours. For chronic nervous affections of the blood, once in six or eight hours.

Arnica.—Once in four hours.

Arum Triphyllum.—I repeat every hour or two.

Asafoetida.—When given for neuralgic affections or nervous I give every hour or two. When for the the syphilitic or chronic troubles, four times per day.

Aurum.—Is a remedy of which I never give more than two doses per day.

Baptisia.—Is another remedy which I do not repeat very frequently; every four, six or eight hours is often enough to give baptisia.

Baryta Carbonica.—I never found that a patient taking this remedy improved any more rapidly for giving more than one dose per day.

Belladonna.—The effects of belladonna soon disappear; this has been shown in our provings and I have verified it in practice. I never make the interval between doses more than two hours, often giving it every half hour.

Berberis.—Once in four hours.

Borax.—A comparatively slow-acting remedy; four doses per day.

Acetic Acid.—In cases of membranous croup I give in not longer intervals than two hours. For the other conditions not oftener than every six hours.

Aconite.—I usually give every half hour. It is seldom that aconite needs to be given more than one or two doses.

Hydrocyanic Acid.—I have never used except for affections of the stomach and throat and repeat every half hour, at least not longer than an hour.

Picric Acid.—Two or four doses a day, not more than four.

Aethusa.—I only use for its gastric symptoms and repeat the dose every two hours.

Agaricus.—I find I repeat at intervals not longer than two hours.

Aloes.—Not oftener than once in four hours.

Alumina.—One or two doses per day.

Ammonia.—I find I repeat the different preparations of ammonia frequently, and that which is repeated at the shortest interval is ammonium carb., for either respiratory or heart trouble. I find I repeat this every half hour in many cases.

Arsenicum.—If there is a remedy in the Materia Medica whose repetition varies with the conditions for which it is given, arsenicum is one of the most marked. I find in those affections in which the mucous membrane is affected, such, for instance, as gastritis, hay fever, acute diarrhœa, that remedy should be repeated at intervals of about one hour. In other affections, such as Bright's disease, cancer, eczema and chronic diarrhœa, that one or two doses per day seems to give better results than once an hour. For the first group of symptoms I use from the third to the thirtieth; for the others, from the thirtieth up.

Bromium.—Bromium I use only for trouble of the respiratory organs and make the interval between the doses short, one-half to an hour.

Bryonia.—Every three hours.

Cactus.—From fifteen minutes to three hours.

Calcarea Carb. and Calcarea Phos.—Three or four doses daily.

Cannabis Indica.—Every two hours.

Camphor.—Every fifteen to sixty minutes.

Cannabis Sat.—Every four hours.

Cantharis.—Every three hours.

Capsicum.—Four times per day.

Carbo Vegetabilis.—When used to restore the vital powers, once an hour. For the other troubles calling for this remedy, four times per day.

Carbolic Acid.—Every two hours.

Causticum.—Four times per day.

Cedron.—Every six hours.

Chamomilla.—From one to three hours.

Chelidonium.—Every six hours.

China.—To prevent hemorrhage, every fifteen minutes; for this purpose I always use the drug low. For the other conditions, every four hours.

Cicuta.—Every half hour to an hour.

Cimicifuga.—For acute cases, every two hours; chronic, three times per day.

Cina.—One dose daily as early as possible before breakfast.

Cocculus.—Every six hours.

Coffea.—Every two hours.

Colchicum.—Every two hours.

Colocynth.—For colic, every fifteen minutes in hot water; for the other troubles, every two hours.

Conium.—Four times a day.

Convallaria.—For heart affections, every hour or oftener. For pelvic congestion, every four hours.

Corallium.—Once in five hours.

Crotalus.—Once in four hours.

Croton Tiglium.—For the bowel troubles, every hour; for skin troubles, once in four hours.

Cuprum.—For the bowel troubles, every hour; for the mental and nervous troubles, every four hours.

Digitalis.—As a heart tonic for palliative purposes, as often as every hour. To sustain the heart or to cure heart affections, for times per day.

Dioscorea.—I only use in colic and repeat every hour, sometimes oftener.

Equisetum.—Every six hours.

Eupatorcum.—For the eye troubles or measles, every three hours;

Euphrasia.—For the eye troubles or measles, every three hours; for the skin trouble, four times per day.

Ferrum.—Two doses per day.

Ferrum Phos.—Not longer than two hours; often for the pulmonary symptoms every hour.

Gelsemium.—For the acute nervous symptoms, every three hours; for the acute catarrhal symptoms, every two hours; for the chronic nervous troubles, four times per day.

Glonoine.—I never have succeeded in getting the good effects of glonoine if the interval between the doses is over an hour. The only exception to this rule may be that in chronic cases of sunstroke, and even here I do not make the interval longer than three hours.

Graphites.—Two or three doses a day.

Hamamelis.—Once in six hours.

Hellebore.—Every three hours.

Hepar.—When I used the thirtieth for the purposes of aborting suppuration I gave about four doses per day. When I want to hasten suppuration I give the third and repeat every two hours.

Hydrastis.—Every four hours.

Hyoscyamus.—Like belladonna and stramonium, I repeat frequently, making the interval about two hours.

Ignatia.—Every three hours.

Iodine.—In troubles of the respiratory organs I repeat frequently every hour or two. In the glandular, scrofular and rheumatic affections, every four hours.

Iris.—For the nervous headache, every hour. For troubles of the intestinal tract and liver, four times per day.

Kali Bichronicum.—Every six hours.

Kali Bromistum.—Every two hours.

Kali Carbonicum.—Twice a day.

Kali Iodatum.—Same as Kali Carbonicum.

Kreosote.—A slow-acting remedy. Four doses per day.

Lachesis.—Every four hours.

Lilium.—One or two doses per day.

Lithium Carb.—Three or four doses per day.

Lycopodium.—I find, is a remedy that we cannot hurry. One or two doses a day is as good as a dozen.

The Magnesias, especially Magnesia Phos., should be repeated more frequently. As a rule, I give them every three hours, but I often give Magnesia Phos. every half hour or hour.

The mercuries do not bear repetition oftener than three or four hours; the exception would be the mercurius corr., which I repeat oftener in acute dysentery.

Mezereum.—Three or four doses per day.

Moschus.—Every half hour to an hour.

Murex.—Like sepia and carbo veg., are slow-acting remedies; one or two doses a day.

Muriatic Acid.—As a rule, every six hours; in a case of stomatitis I advise a local application in case of an infant each time before the child nurses.

Natrum Muriaticum and Natrum Carbonicum.—Four doses per day.

Nitric Acid.—In case of hemorrhage from typhoid fever, once in half an hour; for the other conditions, every four hours.

Nux Vomica.—I find, on looking over my record, that this remedy has the most irregular interval of any. For acute intestinal disorders I repeat as often as every hour, but for the chronic intestinal troubles not more than four (4) doses in twenty-four hours. For convulsions, every half-hour. For chronic spinal troubles, anæmia calling for nux, before each meal.

Opium.—For its homœopathic uses I repeat the dose every four or six hours. I have repeated opium thirtieth every hour in a few cases of cerebral hemorrhage.

Oxalic Acid.—Every four hours.

Phosphoric Acid.—Every four hours.

Phosphorus.—A slow-acting drug, not to be repeated oftener than every four or six hours. The exception is for acute gastritis, when I give it every two hours.

Phytolacca.—Every three hours.

Plantago.—The only use I make of it is for neuralgic toothache, and I repeat every fifteen minutes.

Platinum.—Twice daily.

Plumbum.—Twice daily for all conditions except the colic, for which I repeat once in fifteen or thirty minutes.

Podophyllum.—Acute symptoms, every hour; chronic, four times daily.

Pulsatilla.—Every four hours except for the acute stomach symptoms—i. e., the acute dyspepsia from ice cream, etc., when I give every fifteen minutes.

Ranunculus Bulbosus.—Every hour or two.

Rheum.—Every hour.

Rhus Toxicodendron.—Every four or six hours.

Sabadilla.—Every hour or two.

Sabina.—Every three hours.

Sanguinaria.—Every three hours.

Secale.—Every four or six hours. This does not include its physiological uses.

Sepia.—Two or three times daily.

Silica.—Four times daily.

Spigelia.—From fifteen minuts to two hours.

Spongia.—For croup, every fifteen minutes. For glandular troubles, every four or six hours.

Stannum.—Four doses daily.

Sulphur.—If I repeat at all, it is four times daily. I seldom repeat; if so it is for diarrhœa.

Thuja.—Twice daily.

Veratrum Album.—Every thirty minutes.

Veratrum Viride.—Acute cases, every thirty to sixty minutes.

Zinc.—Twice daily.

W. L. MORGAN, M. D.: I would like to add some observations of my own to the already extensive and valuable observations made here this afternoon. In regard to repetition of the dose in diarrhoeas and other bowel complaints, or rather for intermittent cases, the same principle applies for both, not to repeat the dose after every movement of the bowels, but after every second action. I have found that I did mischief by repeating the dose after every action of the bowels. In diarrhœa there is generally after one action an accumulation in the intestines of an acrid substance that is necessary to be passed off at the next action, but better after the third action of the bowels, because the first dose of medicine is liable to cure the complaint and stop the production of this secretion, and a second dose is unnecessary, and is better not given. Give a dose after each second action, then when the patient has enough and the case is really cured do not give any more medicine, but give a dose of sac lac every day for a few days.

My second observation applies to intermittent fevers where the paroxysm occurs at regular intervals. Select the remedy with great care and be ready as the chill passes off before the fever commences to give the indicated remedy. I will say that where the 30th has been used by the gentleman in his case I have used from the two hundredth up to the hundred thousandth. Do not repeat it again only after the chill or second paroxysm, because often we have the case cured by the first dose and it is better not to repeat the dose.

I have also found that there is a difference in the time drugs act in different cases, and in different conditions, and I regard this as a thing that requires the most careful attention, because I have never found the same drug to act in the same way in the same kind of cases at different times.

To overcome that difficulty I have used the same rule adopted by Dr. Royal. If the patient gets better and then in a little while worse, do not repeat the dose immediately, but watch carefully to see if it is not a wave of reaction from the drug, which is very difficult to decide.

In Indiana, where I practiced for some years, I found that disease came with much greater violence and acted much quicker than in the section where I now practice, in Baltimore. A case of pneumonia in Indiana must have attention right away, where in Baltimore it will hardly arouse the patient's friends to action in less than twenty-four hours or three days. These are some observations of mine which may or may not be of value. I give them, hoping they may be of some use.

C. H. EVANS, M. D.: I have had a working rule for a good many years which runs something like this: In very acute cases with very severe pain or prostration coming on very early I repeat the dose every fifteen, twenty or thirty minutes. Subacute cases require a dose on an average every one or two hours. Then another class of cases which might be called a little milder but not enough to be called chronic cases or severe enough to be called subacute need the drug about every three hours, while in chronic cases I give the drug every four hours or three times a day. This rule has seemed to work very well in my experience. When I have departed from it I have had reason to regret it. But I have never thought of tabulating the dosage as Dr. Royal has just read. I think his scheme will be of great value. If we are sure of our drug, sure of our prescription, we should not change unless we are sure it is being given too often. If there has been a very decided improvement, an observing, careful physician will lengthen the interval, repeat it less frequently. I think we should pay more attention to this matter of repetition of the dose, and getting it into tabulated form.

The idea has occurred to me at times with regard to the depth of action of drugs. Some act quickly and not deeply, other drugs very slowly but go on to organic change. I really think that our drugs if pushed long enough in proving would produce the very same organic changes for which we give that drug. There is no such thing, strictly speaking, as a purely functional disease. It is more or less organic, and in giving our drugs we must watch the natural disease with the artificial one as closely as we can, both in its inception, progress and termination.

J. D. COFFIN, M. D.: I think I have prescribed, with regard to the frequency of the dose, more as a matter of judgment with each case. In acute troubles I give the medicine more frequently, while in chronic diseases I do not give it so often. My cases are mostly chronic, and my custom has been to give infrequent doses. For instance, sulphur and arsenicum I generally give four times a day, and sometimes night and morning. I think in that way I get better results than if I would give it every two hours. On the contrary, with urti-

caria and acute cases, and the patient is suffering intensely, I give apis every two hours, and in chronic urticaria when the eruption appears I give apis in shorter intervals. In those terribly acute cases where there is œdema, and that alarming condition of the throat and epiglottis is coming on, in such cases as these where I have been called in consultation I would say that the most rapid relief followed the fifteen-minute administration of apis with the local effect of hot water, water just as hot as could be borne. I gave apis in the third, seldom lower. Sometimes I give it in the sixth. I have always had the feeling that if we get the right remedy it is going to cure the disease no matter what the dose is. I think the matter of dose is more a matter of temperament with the individual who gives it. If the law is right, and the indicated remedy is selected, it will help the case.

It seems to me that the idiosyncrasy of the patient should be taken into account much more than it is. Some people are exceedingly sensitive to the influence of medicine, while others are not. This seems to me to be an important point to be considered in giving a patient medicine.

J. W. Hayward, M. D.: I think I select my drug according to the symptoms, and gauge its dose by the temperament of my patient. Regarding the "repetition of the dose," I believe I follow in a general way the lines laid down in the most excellent paper that has been read. I repeat the long, slow-acting medicines much less frequently than I do those which act speedily and violently. Aconite, belladonna and veratrum, for instance, I give in severe acute attacks, and repeat at frequent intervals for a short time, while arsenic, sulphur or zinc I give in chronic cases and repeat at long intervals. The latter are my anchors in chronic skin diseases. If one or the other does not cure, I send the case to Dr. Coffin, hence he esteems me highly, as you see.

J. Herbert Moore, M. D.: I am much interested in finding alumina mentioned by Dr. Royal in his list of thoroughly acting remedies; a remedy must be thorough in its action when its administration is required but four times a day. By a coincidence I found at my office last evening, upon my return from the session of our Bureau, a case illustrating this action. A lady was waiting to consult me about a gastric and abdominal distress. I found that though it could be designated as colic it was not a colocynth, nor a dioscorea nor a plumbum case. In addition to the distress the patient complained of a distended, bloated sensation, with oppression, yet stomach and intestines did not seem to her to be actually distended; complained of an uncomfortably dry feeling of skin and mucous membranes, stating she felt

as if she would like to get out of her skin. She asked me if I, while prescribing for these annoyances, would not specially consider an inveterate constipation with which she had been troubled during the last few months, and which was foreign to her ordinary condition. After the clinical points were taken down, the patient stated that she was wearing corsets with aluminum stays and asked if I supposed they could have any bearing on the case. I went to Allen's handbook and underlined some ten or twelve symptoms that tallied very closely with her condition. She then further stated that last fall she put on an aluminum belt, for the purpose of attaching her clothes, which was worn very close to the body, only a thin undervest intervening; and after wearing it for a time she had developed symptoms similar to, but not so severe as, those now present. The patient consulted no professional advice at that time, but upon mentioning the matter to a friend the latter said to her: "I know what the matter is with you—you are wearing an aluminum belt, and if you will dispense with it you will be all right." The advice was taken and the trouble passed away soon after the belt was dispensed with. She had not worn the corsets at that time, but after puting them on a few months since the symptoms were more severe, and the distress extended up into and around the chest and back. The patient is an unusually sensible and practical woman, not at all given to flights of the imagination, and had regarded the matter so lightly that she had put on the aluminum stayed corsets notwithstanding her experiences with the belt. Perhaps I ought not to report this case at this time, inasmuch as time has not afforded the opportunity to follow it out.

Yesterday a member reported an interesting case of mercurial poisoning from wearing a plate of false teeth in the mouth. Some years ago I was called to a very severe case of eczema in a young woman. Could not cure the case and sent her to a specialist, and he to a second specialist, and still no help. A third specialist was called in, who pronounced it a case of arsenical poisoning. Everything was examined for arsenic in the line of paper, carpet, wearing apparel, etc., and finally it was discovered in a large amount in the mattress ticking upon which she had been sleeping; it was one of those highly colored tickings with the alternate broad red and brown stripes; look out for these and in fact all fancy tickings; the old-fashioned narrow blue and white are always safe. This patient's eczema, severe as it was, entirely disappeared with no further treatment save the burning of the ticking.

I could report a case, in extenso, of supposedly tuberculosis of the bowels which recovered after the elimination of lead from the patient's drinking water.

The first three cases mentioned bring to mind the point made by Dr. Dewey that drugs do not have to reach the stomach in order to do their work; a further suggestion is that this work may be poisonous and deadly by these avenues other than the stomach. Whenever our patients present symptoms similar to the action of drugs to whose poisonous action it is possible for the patients to be subjected, let us make sure that it is not poisonous drug action we are trying to combat rather than disease.

J. M. BARTON, M. D.: I would like to speak in regard to what has been said about the repetition of natrum muriaticum. I saw a lady last night who had an acute catarrh of the head. The chief symptom was persistent nausea, which had lasted ten hours, with frontal headache and thirst. I gave her natrum muriaticum sixth in water and she had no nausea after giving the second dose, repeated in an hour. This morning there was no trouble from constant running of glairy mucus into the throat, while the frontal headache, restlessness and thirst were gone. There was apparently no bad result from frequent doses. I often give it in frequent doses in acute cases. What objections can there be to giving natrum muriaticum even as often as once an hour?

O. O. SHEPARD, M. D.: In a case of intense cramps which I had recently I decided that the arsenate of copper was the remedy. I tried it in different potencies, but the cramps did not seem to yield. I read somewhere about giving a dose after each movement of the bowels, so the next morning when I saw the patient I gave the same remedy to be given after each movement. At the end of twenty-four hours he came back and said that he had had only four or five movements after taking the remedy that way. Some time after he came back with another attack, and to prove the principle I gave it right along at first regardless of the movements, but it did not do the work. Then I tried giving it after each movement with the same happy result that I had attained before.

M. M. BROWN, M. D.: One of the first cases I had after leaving college was on the hemiplegia, and the indication in my mind was for arnica, and I gave arnica in the first every hour, and at the end of three days the man was apparently getting no better. Then I read not to repeat arnica often, and I changed to arnica third and repeated it once in four hours, and the man's condition began to change rapidly for the better.

Again, with mercurius iodide and mercurius biniodide it has been my custom to give the third once in three hours. I do not use that

in lower potencies. Belladonna and aconite have both been mentioned as being used frequently. Whenever I think of aconite I think of the description that Carroll Dunham gave of it, of the tremendous storm that comes on all at once. Its action is soon passed, and so I have always thought its action was soon over, and another drug should be thought of.

I have always noticed a dual action from arsenicum. I have used it quite often in chronic catarrhal conditions, and have repeated the dose three or four times a day, or even only once a day.

The metals I use once or twice a day.

A. P. HANCHETT, M. D.: I have been constrained to take the floor to give some experiences I have had with arsenicum. A case of very great interest, and rather peculiar, perhaps, a patient of one of my old families, and one of my best friends, a woman of extreme susceptibility to drugs. She was visiting a neighboring city, and she went to visit a physician who impressed her very favorably, and she began to take treatment with him. She then began to change a great deal from month to month, so that even her friends began to notice it. She became more and more anæmic and puffed about the face, which soon became so marked that everybody noticed it. I had noticed also when I saw her on the street. After a time one day she came to my office and said: "Well, I have come back to you." She told me all about it, how she was better at first, then she began to notice symptoms. The remedies were in tablet form, and she said she had grown steadily paler and weaker until she felt she was not having the right treatment. After studying it over very carefully I found she had been having arsenicum. I happened to know the doctor well, and knew that he used the very lowest potencies. Unquestionably she had sustained a marked poisoning with arsenicum. I gave her the very highest potency I had of arsenicum. She improved and became well in three or four months, and the change was so marked that you would not know the woman.

I am satisfied, from my own observation, that most of us give too much medicine. We give it too often. I have not only my own observations to bear me out in this statement, but those of other men. I think we get better results by abandoning the remedy after impressing the system, when it seems to call for something else.

Some of the extremists in our school never repeat the dose, but stop with one dose. This is going too far, perhaps, but I do believe that as we become more careful about the repetition of our doses we shall get better results and be more satisfied, especially about these slow-

acting conditions, and the observations we get from our own experience will be the only thing that will do it.

W. A. DEWEY, M. D.: I think the discussion has been very interesting and instructive. There have been one or two good points brought out, and one of them was by the gentleman from Baltimore, Dr. Morgan. He made a point that never occurred to me, that perhaps it would be better in cases of diarrhœa to give a dose after every second movement of the bowels instead of after each movement. I think that is a very valuable indication.

As regards the influence of different localities in giving the medicine, I think that is also a good point, as in different localities remedies do act differently. I know that in California certain remedies were almost never indicated. In that locality aconite was rarely indicated, while gelsemium was often indicated.

Temperament, also, as indicated by Dr. Coffin, has considerable influence and should receive careful study.

Dr. Moore and Dr. Hanchett brought up the matter of drug diseases, and I think this is a valuable point. When I get a case resembling plumbum or arsenicum I always inquire into the drug habits of the patient. I have patients come to my clinic for epilepsy, and I find they have been taking the bromides, and very often cases that have been to other physicians are found to have taken too low potencies, and we have to stop them at once. As to too frequent repetition of the dose doing harm, I believe it does. It clogs the system. It delays the cure. I believe the less medicine we are compelled to give, the more we get the homœopathic action of the remedy, the quicker and more pleasant will be the cure.

BUREAU OF CLINICAL MEDICINE AND PATHOLOGY

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BUREAU ADDRESS

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BUREAU OF CLINICAL MEDICINE AND PATHOLOGY.

ADDRESS OF THE ACTING CHAIRMAN

WALTER SANDS MILLS, M. D.

Owing to the illness of Dr. John W. Dowling, who was appointed Chairman of this bureau, I have become the acting chairman, and as such it becomes my duty to make the usual address.

During the past year there have been a few developments in clinical medicine, mainly in the way of etiology of certain diseases. Various bacteria have been isolated and assigned as causative factors in various pathological processes. Prof. Doyen, of Paris, presented a paper at the Fourteenth International Medical Congress, held at Madrid, Spain, during the last week in April, on the etiology of tumors. He described what he calls the micrococcus neoformans, an organism which he believes to be the causative factor in new growths. Pure cultures were grown and inoculated in animals. They caused formation of new tissue by inflammation. He developed a toxin which, when injected into animals, gave a certain reaction.

Dr. Ramony Cajal, of Madrid, at the same place, described what he called the coccidens gigantens. This had been isolated from carcomatous tumors, and he believed it to be the specific cause of sarcoma.

Opposed to these men was Dr. O. Israel, of Berlin. He expressed his belief that tumors are the result of cytobiological conditions, and that they resulted from or were the result of a reaction to an unnatural stimulus. He did not believe in a specific germ origin of tumors.

An editorial written in the *Medical News* of May 16, reviews the work in this line of Prof. Lubaucet, of Posen, who is of the opinion that no specific germ has as yet been found for neoplasms, although from the many points in common that all new growths exhibit he is of the opinion that such a thing is possible.

The same writer also quotes Hemmeter as inclined to the cytobiological theory of the origin of tumors.

At the Madrid Congress, Drs. Poynter and Paine, of London, presented a paper dealing with the cause of rheumatic fever. They isolated a minute diplococcus which aerobic or anaerobic, which they presented as the specific cause of acute articular rheumatism. They

claimed to have isolated it and to have made pure cultures of it. They also stated that animals had been inoculated with the laboratory product and had developed rheumatic fever, chorea, and endocarditis. From the bodies of the rabbits on which these experiments had been made after death, they had been able to again isolate the diplococcus from the joints, the pia, and the valves of the heart. They believe that these experiments had fulfilled the requirements laid down by Koch as necessary before a micro-organism could be accepted as the specific cause of a given disease.

Dr. Paine argued from the same experiments that chorea and rheumatism were closely associated. This relationship has long been known by clinicians, but so far as I am aware, rheumatism and chorea have never before been caused experimentally by the same specific organism. It is only within the last decade that rheumatism has come to be regarded as an acute infectious disease. I ran across a patient this past winter, however, who told me that last year she had had a bad attack of acute articular rheumatism, and that she was very sure her little girl of ten had caught it from her. The child was suffering from a bad mitral stenosis at the time of my examination.

Hauser, of Madrid, at the Congress, made a valuable contribution of malaria. He said the anopholes mosquito was not the only source of malarial contagion. He believed that the plasmodium could exist for an indefinite length of time in humid earth. He said the hematozoon might exist unknown and infect men by way of the air he breathed, or by way of the mosquito as an intermediary post. He believed that inhalation from dried marshes, or drinking water infected with the bodies of dead mosquitoes might also infect men.

In the South and in the Southwest of this country there are many cases of chronic diarrhœas and of chronic cachexias with anemia, that for want of a better name have been classed as malarias. Decided advances have been made in the past year or two in the investigation of these cases. Several intestinal parasites have been discovered and studied. These have been found to cause many of the chronic diarrhœas and anemias spoken of above, in place of the supposed malaria.

Stiles, of Washington, has been one of the leading investigators in this field, and he has described the *uncinaria americanus*. At the recent meeting of the American Medical Association at New Orleans, early in May, Dr. N. L. Price, of Baltimore, gave the result of some original work in the study of the anchylostoma duodenale. He reported that it was sometimes associated with the uncinaria americanus in producing profound anemias.

In this connection it gives me great pleasure to announce that Dr.

Chauncey E. Tennant and Dr. Giles F. Roosevelt, of Denver, Colo., members of the American Institute of Homœopathy, have sent me a paper for this bureau on the uncinaria americanus. They have also forwarded a set of photographs of this parasite. They have been able to grow the uncinaria from the larva. So far as I know, this is the first time that that has ever been done experimentally by any one, previous investigators having succeeded only in getting hold of the worm or ova.

At the Triennial Congress of Physicians and Surgeons, held in Washington, in May, Diseases of the Pancreas was the general subject discussed. Fitz, of Boston, reported that he had many times found extensive pathological changes in the pancreas after death, where no symptoms pointing to that viscus had existed during life. The most constant symptom pointing to disease of the pancreas was the presence of fecal fat and undigested muscle fibre in the stools. This he believed to be pathognomonic.

At the same Congress, Osler called attention to a group of symptoms that he had noted a few times, and which he believed entitled to be classed as a new clinical entity. The leading characteristic was cynanosis, due to polycythemia, an excess of red blood cells. There was no emphysema, or heart disease, but usually a slight amount of albumin in the urine. The red blood cells in one case ran from seven to eleven millions; in another seven to nine millions. The hemoglobin was as high as 165 per cent.

In the discusssion that followed, Hare of Philadelphia, Shattuck of Boston, and Stockton of Buffalo, reported having seen similar cases. They had not thought of calling them cases of a new disease.

An editorial in the *Medical News* suggested that this group of symptoms henceforth be known as Osler's Disease. In a communication to the *News* a week or two later, Dr. Osler stated that Messrs. Saundby and Russel, in the *Lancet*, in 1902, had suggested that these symptoms constituted a new disease. He also stated that Vaquez, Cabot, and McKeen had been the first to report such cases.

At the Congress of Pathologists, held in Washington in conjunction with the Congress of Physicians and Surgeons, Councilman, of Boston, announced his discovery of the cause of small-pox. In the lower epithelial layers of the skin of small-pox cases he had found certain cells that developed spores. These spores he believed to cause variola. The spores were found in the vesicles and pustules.

Since the announcement by Koch, in 1901, that bovine and human tuberculosis are not intercommunicable, investigators have been trying to prove or disprove it.

In an editorial in the *North American Journal of Homoeopathy* for February, 1902, I quoted some experiments reported in the *American Veterinary Review* for November and December, 1901. These experiments were made by Dr. Jon J. Repp, professor of pathology and therapeutics at the Iowa State College. He found that animals fed on tuberculous meat or milk sometimes develop pulmonary tuberculosis without any intestinal lesions whatsoever. It has been the contention of those who disbelieve in food transmission that intestinal lesions must be found to prove food infection.

Repp also reported several cases of tuberculosis in veterinarians who had accidentally infected themselves while performing necropsies on tuberculous cattle.

A German journal later reported two butchers in a German abattoir who had become infected with lupus, tuberculosis of the skin. These men were employed in transporting tuberculous cattle from the killing room to the collecting room of confiscated parts.

At the Washington Congress, Theobold Smith, of Washington, reported two cases of tuberculosis of the mesenteric glands, probably due to infected food. One case exhibted the bovine tubercle bacillus; the other exhibited the human tubercle bacillus. In cows inoculated with these bacteria the bovine bacillus grew rapidly; the human bacillus more slowly.

Kober, of Washington, at the same meeting, presented eighty-six cases collected from various sources, of intestinal tuberculosis in the human subject. They were all said to have become infected from tuberculous milk. Kober expressed the belief that the lymphatic form of tuberculosis, scrofula, was the form most frequently caused by tuberculous milk.

The various subjects that I have so far touched upon relate exclusively to diagnosis. In that branch of medicine advances are surely being made. But is it so in treatment? The best that the dominant school has to offer today is in the line of serum treatment. This treatment is applicable only to the diseases caused by a specific organism. You are all familiar with the theory of serum treatment. The specific cause of the disease acts as a poison and produces a given train of symptoms. After a longer or shorter time a natural antidote to the poison is produced, an anti-toxin, which finally annihilates the disease and the patient recovers. Investigators in this subject are constantly at work in the endeavor to find an anti-toxin for each disease; in other words, a specific for it. At the present moment many anti-toxins have been exploited. Only one has been of sufficient benefit to win many adherents. I, of course, refer to the anti-toxin of diphtheria; and even that has many non-believers,

I have read recently that the serum treatment of plague has been abandoned in India. The deaths from that scourge have already this year exceeded three hundred thousand more deaths than in any one whole year since the present outbreak at the Ganges. The plague serum has failed to check it.

At the Madrid Congress, Josios, of Paris, reported his use of the typhoid fever anti-toxin. He tried it on fifty children, with a mortality of four per cent. The general mortality during the same year was fourteen per cent. Whether this will hold good with further use I do not know.

A writer in the New York Medical Times tells of the extensive work done in inoculating against typhoid fever during the Boer war. I have not studied the original reports, but from what the writer referred to has to say, I think the verdict might be "not proven."

Moser, of Berlin, also reported his use of a new scarlet fever anti-toxin. It is produced by inoculating horses with streptococci and heart's blood taken from scarlet fever patients. After seven months the horses are bled and the serum separated for use. Moser gives one hundred fifty c. m. at a dose. He reported the use of this serum in one hundred and forty-two cases, with a mortality of one-half of one per cent. In conclusion, he stated that the serum counteracts the vomiting. The delirium, the redness, the high pulse rate and the temperature are favorably acted upon in one day. He also claimed that post scarlatinal nephritis is prevented. This statement was severely criticised.

I have given you, in outline, the best that there is in the province of medicine by investigators in the old school, during the best year. As a very prominent physician of my acquaintance said to me a few days ago, a physician of the dominant school: "The progress is all in the line of diagnosis; nothing in treatment. We don't know a thing about treatment." I suggested homoeopathy to him. His answer was: "I do not believe in specifics. There are no such things. Quinine is not a specific in malaria; the iodides and mercuries are not specific in syphilis; anti-toxin is not a specific in diphtheria. We know nothing of treatment." My friend showed that he did not know what homoeopathy was. But he also showed the chaotic condition of the old school therapeutics.

In homoeopathy we have the only law of cure that is known today, *"Similia Similibus Curantur."* We are the custodians of it. We have a great trust. In time it must be accepted by all. Until then we, and those who succeed us, must see to it that it is not lost amidst the wilderness of unbelief. Our success will lie in the study of disease, in the study of the exact action of drugs on the human body and in the strict application of our law.

OBSERVATIONS ON THE TREATMENT OF PULMONARY TUBERCULOSIS, WITH A REPORT OF THE TUBERCULOSIS INFIRMARY OF THE METROPOLITAN HOSPITAL

EGBERT GUERNSEY RANKIN, A. M., M. D.
NEW YORK

In the great conflict against tuberculosis which is now going on, or rather which has really only just commenced, the most powerful weapon is prophylaxis, and as therapeutics now stands, our main hope in eradicating the disease depends upon the rigid and widespread enforcement of preventive measures.

There are two aspects to this great question of prevention, the public or legislative and the private or individual. In regard to the former it is gratifying to note that various health boards are awakening to the situation and have enacted laws accordingly. These laws, however, in many respects are inadequate or too loosely enforced. There are also many problems in regard to isolation and the proper segregation of tuberculous patients which are yet unsolved. For example, what shall be done with that class of patients in the early stages who are yet sufficiently strong to attend to their usual duties? These are doubtless a very fruitful source of infection. Shall a tuberculous man, for instance, with a family to support, who is yet able to attend to his work, be removed and quarantined? Another fruitful source of infection is the patient who after some months in a hospital, finding himself rather worse, goes home to end his days. These are certainly difficult questions, but they must be answered if tuberculosis is to be stamped out. Pending their solution we must look to the individual side of the question and endeavor to educate the public in regard to the nature of the disease and the means which should be instituted in the household for the prevention of infection. The efforts, therefore, which are now on foot to educate the masses in regard to these great questions by free lectures and the distribution of literature, should receive the cordial endorsement and encouragement of the profession at large.

Up to January of last year the City of New York in its public institutions paid no heed to the fact that tuberculosis was infectious, and the tuberculous and non-tuberculous were all under the same roofs and in many instances in the same wards side by side. The first step to correct this deplorable condition of affairs was witnessed on January 31, 1902, in the opening of the Tuberculosis Infirmary of the Metropolitan Hospital on Blackwell's Island, when certain vacant buildings about a

quarter of a mile from the Metropolitan Hospital, at the solicitation of the Metropolitan Medical Board, were set aside for this purpose by the Honorable Homer Folks, Commissioner of Charities. Thus the Honorable Commissioner and the Metropolitan Board share the credit of this initiatory step, and may we not add that branch of the professsion of which we are members?

The Metropolitan Infirmary accommodates about 450 patients. Besides this municipal institution, there are in the City of New York six other institutions which receive tuberculosis patients with an aggregate capacity of about something less than 1,000 beds.

When we take into consideration the fact that it is estimated that there are about twenty-five thousand tuberculosis patients in the City of New York, the inadequacy of the present accommodations speaks for itself. Yet, notwithstanding an annual increase of population of over 100,000, the statistics of the Board of Health for last year show a decrease of 500 in deaths from tuberculous diseases in comparison to the year previous, and there is no doubt that the segregation of tuberculous patients in the new Infirmary, limited though it may be, has been a factor in bringing about this result.

As a municipal institution the Metropolitan Tuberculosis Infirmary is obliged to receive patients in any stage of the disease, no matter how far advanced. An extremely limited number are in the incipient stages, a large number in well advanced, and a large number again in the last stages. Some are brought to the hospital almost in extremis. One reason why the patients received at this institution are so far advanced in the disease is doubtless due to the fact that they are almost entirely from the laboring classes and either through ignorance of their condition or necessity, work until they can work no longer.

The Infirmary consists of two buildings, one of brick two stories in height for females, accommodating in open ward about 90 patients; the other of stone, for males, three stories in height, accommodating about 240. The latter building is especially well adapted for the purpose, having spacious corridors from which open a series of rooms without doors—for better ventilation. There are also ten tents accommodating about 120 patients. A solarium 200 feet long and 25 feet wide is under contract.

The situation on Blackwell's Island, as far as the City of New York is concerned, is admirably suited for consumptives, blending as it does isolation and convenience. It may be argued that the salt air of the East River is not the best for consumptives. While this is in many instances true, it is infinitely better than the air of close tenements or lodging houses.

It is an accepted and unquestioned fact that the first requisites in treatment are an abundance of fresh air and the maximum degree of nutrition. To fulfil the first condition implies the selection of a suitable climate, life in the open air and the most favorable hygienic surroundings. Generally speaking, plenty of fresh air of any kind will do much good, but an equable climate with a maximum degree of sunshine and a minimum of moisture is the best. Dryness, however, is not always essential, as evidenced by the good results obtained at Torquay, England, and at Blackwell's Island.

After fresh air and super-alimentation, the great factor in the treatment of pulmonary tuberculosis is that of therapeutics. The specific germicide, or antitoxine, thus far has proved a veritable will-o'-the-wisp. Remedy after remedy has been brought before the profession only to fall into desuetude: Koch's tuberculin, Maragliano's antituberculosis serum, antiphthisim and so on; while new remedial measures are appearing almost daily, until the question has been raised, are remedies of any kind of service at all? And in some institutions devoted to the care of pulmonary tuberculosis none are now employed except for complications and as palliatives.

Let us discuss a few of the best known drugs in use for tuberculosis.

Among the most popular is *creosote* and its derivatives, originally employed for its supposed antitubercular powers. It is now recognized as destitute of any such property when administered in medicinal doses. It should, however, not be discarded, for it is often of great benefit in stimulating the nutrition. Guaiacol, its derivative, appears to lessen the cough and expectoration, but does not retard the progress of the disease to any extent.

Iodoform, in the form of inunctions, has been employed by the writer in a number of instances. The remedy is administered in the same manner as a mercurial ointment, using at each application about one drachm of the following:

R. Iodoformi, one-half ounce;
Ol. asini, 10 to 30 minims;
Ol. gaultheriae, 2 minims;
Ol. olivae,
Lanolini, of each, five ounces.

The inunctions must be continued for weeks. No injurious effects were observed in any instance. Of a certain series of eleven cases under this treatment, in one the disease appeared to have been arrested, in three there was marked improvement and the patients left the hospital. The remainder did not show any improvement. An interesting

and at the same time curious feature observed in some of the latter was the increase in weight, notwithstanding decided evidences of the advance of the disease.

Ichthyol, at one time much in vogue, has also been used by the writer quite extensively, commencing with three drops of the crude drug in capsules three times a day and gradually increasing the dose up to the point of tolerance, which was generally reached when eighteen or twenty minims were given. The results in about forty cases showed that the remedy in some was of decided benefit, while with others it was without effect. No especial indications were discovered which could be said to in any way point to its administration.

Cod-liver oil has in some quarters met with disfavor, yet it certainly helps nutrition. In public institutions where the dietary is somewhat limited it is to be recommended.

Strychnia, in doses of 1-100 to 1-50 grain three times a day, acts beneficially in cases characterized by nervous symptoms and weakness of the digestion, and may be employed in such cases.

Favorable results have been published in regard to the X-ray, At the present time the writer, in association with Dr. W. A. Dieffenbach, is conducting a series of observations as to its utility, reports of which will be presented to the profession later.

But let us turn to another class of remedies, a class administered upon a different basis of indications, namely, that of similia. What claim have these? Let us turn for an answer to the Metropolitan Tuberculosis Infirmary, the largest hospital of its kind in the country. The writer finds that it is the general consensus of opinion of its medical staff, that, with the maximum amount of fresh air and suitable nutrition, better results are obtained with medicine than without, and, of the various lines of treatment, as far as medication is concerned, as therapeutics now stands, medicines administered according to the principle of similia are attended with the best results. It should be borne in mind that the Medical Staff of the Tuberculosis Infirmary are at liberty to employ any line of treatment which holds out any hope of benefit, and this conclusion therefore may be presumed to be unprejudiced.

The drugs that have proved most useful are those which have a pathogenetic standpoint and act upon the whole system, especially the nutrition, the principal ones being arsenicum iodidum, stannum iodidum, arsenicum album, chininum arsenicum, antimonium iodidum, antimonium tartaricum, silica, phosphorus and the different forms of calcarea. In the complications, while employing every means known to the medical art which may relieve, it seems trite to say that remedies

administered according to the principle of similia have proved their value over and over again; for example, agaricin, pilocarpin and phosphoric acid in the night sweats, arsenicum and cufia in the diarrhœa, and millefolium ipecac and hamamelis in the hæmorrhagic.

It is not claimed that the above line of treatment is in any way antitubercular, for that would be a manifest absurdity, but careful observation points to the conclusion that such remedies as adjuncts to fresh air and the maximum degree of nutrition place the patient in a condition better to resist the inroads of the bacillus and the consequences of its destructive influence upon the system.

The following is a summary of the statistics of the Metropolitan Tuberculosis Infirmary:

January 31, 1902, to April 30, 1903.

Patients admitted		2,094
Remaining in Hospital, April 30	367	
Deaths	623	
Transferred to Main Hospital for surgical reasons	77	
Transferred to Main Hospital as not having tuberculosis	89	
	1,156	
Discharged:		
Disease arrested	10	
Much improved	139)	
	)	661
Improved	532)	
Unimproved	257	—2,094
	938	

Percentage of Improved, 34.81+; Percentage of Death, 29.68+.
Re-admissions, January 31, 1902, to April 30, 1903, 244.

Report by Stage of Disease.

July 1, 1902, to March 31, 1903.

Patients admitted		1,196
Of the above, 630 were classified and remained in the Hospital thirty days and over.		
Remaining in Hospital	313	
Transferred to Main Hospital for surgical reasons	24	
Discharged	167	
Died	129	
Total		663

Class A. Incipient Cases.

Discharged:	
Much improved	1
Improved	3

Results of Treatment of Discharged Patients.

June 1, 1902, to April 30, 1903.

Patients discharged		902
Homoeopathic		744
Disease arrested	7	
Much improved	146	
Improved	460	
Less favorable condition	131	

Improved in some degree, 82.31 per cent.

Unclassed		51
Much improved	3	
Improved	33	
Less favorable condition	15	

Improved in some degree, 70 per cent.

No medicine		89
Much improved	3	
Improved	49	
Less favorable condition	37	

Improved in some degree, 58.42 per cent.

Ichthyol		3
Improved	3	
Creosote		4
Disease arrested	1	
Improved	3	

It should be borne in mind that, as stated, a large proportion of the cases which come to the institution are hopelessly advanced.

Class B.

Cases well advanced but still retaining a fair amount of strength.

Discharged:		
Much improved	26	
Improved	43	
Unimproved	27	
Transferred		7
Died		4

Sixty-nine out of 107 improved; 4 died.

Class C.

Advanced cases, but still able to be about.

Discharged:		
Much improved	46	
Improved	162	
Unimproved	81	
Transferred		13
Died		57

Two hundred and eight out of 359 improved; 57 died.

Class D.

Last stages—bed cases.

Discharged:		
Much improved	5	
Improved	31	
Unimproved	55	
Transferred		4
Died		68

Thirty-six out of 163 improved; 68 died.

Total	630

List of a Part of the Patients Who Have Gained in Weight.

Name.	Gain of weight.	Length of stay in Hospital.	Name.	Gain of weight.	Length of stay in Hospital.
C. P.	16 lbs.	69 days	D. H.	14 lbs.	48 days
L. P.	20 "	53 "	P. McG.	15 "	127 "
M. T.	15 "	137 "	E. J.	14 "	44 "
J. C.	25 "	53 "	T. C.	11 "	54 "
A. M.	19 "	35 "	W. M.	17 "	90 "
P. T.	20 "	93 "	B. McG.	13 "	101 "
F. M.	15 "	51 "	J. M.	19 "	104 "
M. M.	16 "	104 "	M. P.	16 "	45 "
E. G.	10 "	40 "	R. G.	13 "	100 "
W. B.	24 "	53 "	H. D.	12 "	193 "
T. McA.	19 "	52 "	H. W.	17 "	173 "
H. H.	23 "	50 "	J. D.	26 "	152 "
R. M.	27 "	80 "	F. R.	11 "	155 "
W. D.	14 "	147 "	T. M.	14 "	38 "
J. M.	13 "	95 "	K. C.	18 "	61 "
M. McF.	13 "	35 "	T. J.	14 "	73 "
M. L.	16 "	143 "	C. M.	20 "	139 "
E. Y.	22 "	67 "	J. G.	15 "	90 "
E. L.	17 "	84 "	C. F.	52 "	122 "
J. W.	10 "	205 "	D. S.	12 "	65 "
J. P.	13 "	133 "	D. G.	12 "	25 "
J. C.	23 "	354 "	P. C.	17 "	124 "
M. C.	14 "	276 "	A. C.	24 "	124 "
M. M.	13 "	62 "	A. T. T.	24 "	61 "
J. B.	15 "	80 "	J. T.	14 "	123 "
C. N.	15 "	199 "	C. T.	36 "	53 "

DISCUSSION

EDWARD RUSHMORE, M. D.: In addition to the remedies mentioned in the paper, I would speak of muriate of ammonia, aggravation lying on the right side or back, and chilling between the shoulders. Stannum has often met these symptoms. Another remedy is natrum carbonicum. It is one that meets the night sweats and cough. Another remedy I might mention is acetic acid; this is serviceable when the diarrheas of advanced phthisis occur. Another remedy to which the symptoms sometimes lead is kali carbonicum.

A. M. CUSHING, M. D.: About sixty-five years ago my brother came home from a consultation with the Professors of Dartmouth Medical College, who told him he must die of consumption. He is now 78 years of age and in good health. Eight years ago a man of fifty-five was given up to die of consumption. I medicated some olive oil with a little cinnamon and gave by hypodermic injection in the arm, not more than one-fourth of a dram at a time, some three times, two or three days apart, and there was almost immediate and rapid improvement, and he is now a pretty well man.

J. A. WHITMAN, M. D.: Some years ago, I had a case where curiosity led me to look at the condition of the blood. The patient

was within about one month of his end. I pricked his finger, took some blood and put it on a slide and found a mass of liquid, like red dye. There were no indications of any corpuscles of blood matter whatever; merely a pure red serum.

GEO. F. LAIDLAW, M. D.: I do not like to let the statement pass uncriticised that there is a drop of blood without corpuscles as characteristic of the tubercular condition. I think the doctor obtained a drop of serum. In any cachectic disease where the blood retires from the surface, it is difficult to get a drop of blood. You can puncture the skin, but the capillary circulation has so far retired that you can scarcely secure a drop of blood, but you get instead a drop of liquid, which is serum. But as to having a drop of blood without corpuscles, that I cannot admit. Diagnosing from the condition of the blood is a matter that is being investigated by careful men all over the world, but as yet the secret has not been found, either of cancer or tuberculosis. In neither case can you make a diagnosis by the condition of the blood. The blood of the tuberculous patient, in the early stage, appears exceptionally rich. The number of red corpuscles to the c. m. is five million in men; four and one-half million in women. In the second stage of the disease you will not be surprised to find seven, nine or even ten million red corpuscles to the c. m., and this in the case of the very cachectic and yellow-looking patients. That is a phenomena mentioned in all text books: the exceedingly large number of red corpuscles in early phthisis. The blood is not exceptionally rich or better than any other blood; but the capillary circulation on the surface is sluggish; the tissues are turgescent; the blood is thickened, having lost more serum into the tissues than in the normal state of the circulation, and the blood left in the vessels is concentrated. It has come in my blood work to be quite a sufficient sign; when there is cough and a deficiency of blood corpuscles I make an examination of the lungs to detect further deficiency. The same condition is associated in some other diseases, obstructive diseases of the heart or mitral stenosis of the heart; cyanotic conditions where the tips of the fingers get bluish; the ears, nose and chin take on a cyanotic condition. As the cachexia develops and the patient becomes more and more yellow and more and more weak, an anemia sets in; the red corpuscles decrease in number, rarely falling below two and one-half or three million. When cavity formation takes place you get leukocytes, but in that it seems reasonable enough. So I would stand on the position that there is no condition of the blood by which we can make diagnosis, either as to the red or white cells. We find, in all the cases, the tubercle bacillus in the blood.

J. A. WHITMAN, M. D.: If you ever make a microscopical examination of the blood and find the corpuscles beginning to break down and if you save that patient, please to write me.

A. D. YOUNG, M. D.: I have had one severe case cured by tuberculinum; these isolated cases are of no value in my mind, but the patient gets well occasionally under this remedy, and that, and I should like to know if there are records of any number of cases recovering under tuberculinum.

E. G. RANKIN, M. D.: I would say that there are a number of remedies, so to speak, employed with good results: tuberculinum, creosote, and others. Kreosote in three cases proved effective; but three is not enough; it is the large number you want. Therefore, in seven-hundred-odd cases under homoeopathic treatment and eighty-odd cases under old-school treatment, and fifty that were under hygienic treatment, we have a certain number upon which we could make our basis of treatment. Notwithstanding, I have not any figures to give of special remedies used up there with good effect. But our greatest success has been, as I have said, with remedies according to indications.

I would say also in reference to stannum I think I mentioned that remedy. There are a great many remedies I did not mention, because it is obviously a long list; but the remedies I did mention were principally in use; my cases were under remedies of that class.

W. H. DIEFFENBACH, M. D.: In regard to the use of the X-ray in pulmonary tuberculosis and phthisis, I read a paper last year in Cleveland on the results in private practice, on patients treated with this agent, and at that time I was very sanguine as to the worth of this adjuvant in this disease and reported a number of cases that showed marked improvement. I can report at the present time that that practice has been continued. Through the efforts of Dr. Rankin and myself we succeeded in securing a complete X-ray plant at the Metropolitan Hospital, Blackwell's Island, and have determined to give this agent a complete test there this coming summer. We have up to date selected twenty cases who receive the usual treatment in regard to diet, fresh air, exercise and medicine, and in addition are sent to the X-ray room for treatment. Those twenty cases we are watching very closely, noting their changes, noting the fact whether they are improving or not, and I think possibly by next year, at the Niagara meeting, we will be able to give a detailed report as to the exact advantage of the X-ray in certain cases. As Dr. Rankin has so well emphasized, the cases which we receive there are not incipient cases but practically cases which

have to die unless they receive some such treatment as they receive there. Therefore, as you can readily see, if we can help any of these cases even in a small degree, with our various methods, we will be doing good work. It looks theoretical to use the X-ray in tuberculosis; but you all know the X-ray has been used very extensively in the treatment of lupus vulgaris, which, as you also know, is of tubercular origin and in which the X-ray is a specific. It is used in the treatment of various cancerous conditions with very good success. Those treatments are based on the principle of producing a destruction of tissue; while the treatment which we have inaugurated, the treatment of pulmonary tuberculosis, is based on a different principle. We give, instead of the usual fifteen or eighteen minute treatment in cancer or lupus vulgaris, in pulmonary tuberculosis and phthisis, a similar treatment of but five minutes' duration. We have found and recent experiments have also shown that the X-ray is nothing but a ray of light containing a large per centage of actinic rays. We have found that these rays of light sent through the system, in cases of pulmonary tuberculosis, have a distinct stimulating action on the patient. Examination of the blood and sputum after treatment have shown changes, proving that the X-ray has been decidedly beneficial; but how far the X-ray is going to help these cases I do not know and do not wish to make any statement which cannot be borne out by future observations. But if those who possess these instruments, the X-ray and static machine will give the agent a trial during the next year and be prepared to give their experiences at Niagara Falls next year, we may be able to draw deductions that will be useful in the future.

The treatment by the X-ray consists of a stimulating treatment: subject the anterior thorax to five minutes ray and the posterior thorax to a ray of the same length of time, using the high tube to secure penetration. After that the routine of treatment consists of the static spray, using the positive pole for its sedative action, and the patient usually leaves the room imbued with the idea that they have been helped a good deal. There may be a good deal of suggestion in this, but they feel much improved, and the twenty cases experimented upon so far have shown decided signs of improvement. I wish to defer making positive statements on the actual results until next year, when I hope to be able to give a complete and scientific report of what we have done at the Metropolitan Hospital.

WALTER H. TOBEY, M. D.: I would like to ask, when Dr. Rankin replies to state particularly about the dietary of his hospital and the Metropolitan Hospital.

E. G. RANKIN, M. D.: The dietary at the Metropolitan Hospital

is hardly the diet of the ordinary tuberculosis patient. You must recall that the Metropolitan is a municipal institution, under the jurisdiction of the Department of Public Charities of the State of New York; and as such it has to take what it is given. We do not always get what we want. We are grateful for what we can get. However, the present administration has been rather generous. I will mention as near as I can remember, some of the articles of food, which will strike you as very crude; but you must recall the class of patients which we have to treat. The large majority are very poor; some of them are respectable laboring men, but a very great portion are below that class. For instance, in the morning they have for breakfast a porridge of some kind; oat meal, cracked wheat, or something like that; a cup of coffee, with milk in it, real milk; I mean by that, cow's milk. We have two kinds of milk—condensed milk and what they call cow's milk; the condensed milk is supposed to be cow's milk also. Then a large slice of thick bread, which is very good, and some butter which is not so good.

At noon, at least about eleven o'clock, there is served a so-called egg nog. I say "so-called" because the amount of spirits in it is not very extensive but usually enough to give it a flavor. This egg nog consists of milk in the proportion of half a pint to a patient, with one or two eggs to a patient.

Then at dinner time there is some sort of meat, usually boiled meat, with potatoes; bread again; and some simple pudding, such as rice pudding, or corn starch.

In the afternoon there is beef tea served, or again egg nog.

In the evening there is tea, and some stewed fruit, and two large slices of bread.

At bed time there is a glass of milk.

This diet is varied also in the middle of the day by milk. Now, besides that, there is an extra diet list consisting of the best form of steak and beef tea, and an extra ounce of milk in the evening. That is the Metropolitan diet. We do not maintain that that is the best diet, because it is obvious there are many articles of nutritious food which are lacking in this dietary; but, crude as it is, it has accomplished very excellent results.

I have a list of the patients and the amount gained, and this gain averages about ten pounds. The highest is fifty-two; many gain fourteen to twenty pounds during a stay of seven months. The expense to the city is about twenty-eight cents a head daily; which does not seem a very large sum, but when you multiply it, as it necessarily is multiplied, it amounts to over one hundred thousand dollars a year,

In regard to the dietary of the patients of the other class, as in private practice, I think it is important to bear in mind the fact that the outcome of the case depends to a great degree upon the powers of assimilation. If that is feeble and the patient in the early stage of the disease, my experience is he is apt to go down. If he is strong, if digestion is strong and he can assimilate a large amount of food, the prognosis is correspondingly good. For those who are strong and the digestion is in a good state, the ordinary diet is indicated: foods which build up the muscle; red meats; fresh vegetables, with the exception of cabbage (going into detail); plenty of fruit; the use of eggs, especially raw if the patient can eat them; and milk. It has been my practice to supplement the ordinary diet in this class of patients by additional meals; for example, in the morning let the patient have a glass of warm milk, if acceptable, taking care to cleanse the mouth first before taking it; that will be about seven or half-past seven; later breakfast of nutritious food; and then dinner or luncheon. Supplement the breakfast—or midday meal by an extra meal, probably of milk or some light diet, giving it about one and one-half to two hours after the breakfast or luncheon, so that it will not interfere with the succeeding meal. For instance, if breakfast is at eight, the extra meal is much less likely to interfere if taken at half past ten than if at eleven. At night or on retiring the patient should have a glass of hot milk, or something equivalent to it. For those whose digestion is poor, it is obvious this diet must be very much modified, and it must be liquid or semi-liquid.

In the Metropolitan Hospital, for our advanced cases, which I regret to say form so large a proportion of the whole, this diet which I first mentioned is not given of course, but we give them milk, beef peptonoids, beef tea, and articles of that kind.

THE MASSACHUSETTS STATE SANATORIUM FOR CONSUMPTIVES AT RUTLAND, MASS.

HERBERT C. CLAPP, M. D.
BOSTON

It is not my purpose in this paper to describe the technique of the sanatorium treatment of phthisis. Much has been written on the subject in recent years. If any are not familiar with these methods, they can find them described in several books, one of the best of which has been published this year by Arthur Latham of London, on the "Diagnosis and Modern Treatment of Consumption." Besides, I understand that a paper on this subject will be presented to the Institute at this session through another bureau.

Nor do I propose to describe in detail just the equipment for this purpose which we have in this state, beyond barely mentioning the facts that our State Sanatorium is situated fifty-three miles from Boston, in about the geographical center of the state, in the little town of Rutland (which no one ever heard of before), on Lake Muschopauge, at an elevation of about 1,200 feet above sea-level, in a beautiful country with extended views, near Mount Wachusett, twelve miles northwest from Worcester, on a tract of land of 200 acres sloping to the south and protected from the northwest winds by the top of the hill and by woods; that the plant has already cost the state over $300,000; that this month our legislature has voted an additional $150,000 for further enlargment; that the male and female patients are in equal numbers; that the uniform price paid by patients (unless they are put on the free list) is $4.00 a week, and that the cost to the state, in addition to the interest on the investment, is about $10.00 a week per capita.

What I do propose is to describe some of our methods of carrying out in detail those principles of treatment which are (and of necessity must be) common to all sanatoria for consumptives, hoping that our experience may be of benefit to some of you who may be instrumental in procuring the establishment of sanatoria in your own states.

As illustrations which can quickly and accurately convey much information without words and take the place of long descriptions, I append a bird's-eye view and also a block plan of our Sanatorium.

In 1895 a bill passed the Massachusetts Legislature, with but little opposition, establishing the Massachusetts Hospital for Consumptives and Tubercular Patients, the awkward name of which was subsequently changed to THE MASSACHUSETTS STATE SANATORIUM. (It is

not a sanitarium; neither is it a consumptives' home, in the common acceptation of the term.) On October 10, 1898, the buildings having been completed, it was opened for the reception of patients. This has the honor of being the first sanatorium for consumptives in America which is conducted at the public expense, like our insane hospitals and other public institutions. Even now, after having been in successful operation for almost five yers, it is still the only state institution of the kind in this country in actual operation, although the United States Government has since established one for soldiers and one for marines in New Mexico, and several state institutions have been either chartered or projected and will soon be built. Undoubtedly before many years all of the states in our Union will have them, and will find them as necessary as they now find their insane hospitals. They are bound to come.

It has often been said at our State House that our Massachusetts Sanatorium is now the most popular institution in the Commonwealth with our Legislature, and that almost everything in the way of an appropriation which is asked for by our trustees is cheerfully granted; which is not the case with some of our other institutions. The reason is not far to seek. Not only has the general popular sentiment become aroused in its favor, but also many among our senators and representatives have themselves been eye-witnesses of the remarkable restoration to health of some of their friends and constituents.

The demonstration of our success in Massachusetts ought to make it comparatively easy to pass bills through the Legislatures of other states in our Union.

I should like to refer any who may be interested in the establishment of state Sanatoria and who may desire to become posted in convincing arguments in their behalf, to a very able Report to the state of New Hampshire of the Commission appointed to consider the question of a state Sanatorium for Consumptives, dated Nov. 1, 1902. It was printed at Concord, N. H., and the secretary of the Commission was Dr. Irving A. Watson of Concord, who perhaps might be willing to furnish a few printed copies on request. The report, which is profusely illustrated, evidences a great deal of painstaking labor and is a very skillful setting forth of the merits of the question. It convinced the New Hampshire Legislature, and they voted for the bill. Very sad to relate, however, the Governor, playing to the political gods in the gallery, as some think, belittled himself by giving it his veto. They will have to try it again.

I hope that our homoeopathic physicians in the different states will take an interest in the establishment of these state sanatoria and will

endeavor to secure representation for our cause in them, for they will certainly be established before many years, whether we have a part in them or not. This representation should be secured in each case before the bill passes the Legislature and should be a corporate part of the bill. It should not be left to the whims and caprices of a board of trustees, for boards differ in largeness of character and breadth of vision, and the change of one or two members may revolutionize the sentiments of the board. To be sure, the most important part of the treatment is hygienic; but, nevertheless, medicines are called for to quite a considerable extent for different symptoms. Again, medicines with hygiene are better than hygiene alone; and here, as elsewhere, I believe that homoeopathic medication is decidedly superior in efficiency to other kinds.

As to our own experience in Massachusetts. Fortunately for us, when the bill in this State was under consideration several years ago, the friends of homoeopathy, led by Dr. George E. White of Sandwich (who happened to be a member of a committee of the Legislature to which the bill was referred) successfully insisted on having a clause inserted requiring the giving of homoeopathic treatment as well as the other kind.

Of the five trustees appointed by the Governor, one is a homoeopathic physician, Dr. Frederick B. Percey, an honored member of the medical profession and a member of this society. Another is an old school physician, another a lawyer, another a manufacturer, and another an editor. They appointed Dr. W. J. Marcley as Superintendent and Treasurer, to have the executive and financial management of the institution, and they entrusted the medical management to Dr. Bowditch for the old school service and to the writer for the homoeopathic service. Our titles were Examining and Visiting physicians. Boston being the center of population of the State, an examining office was opened there on two forenoons in each week, Dr. Bowditch examining applicants for admission on Wednesdays and I on Saturdays. Printed circulars were sent to all the physicians in the State, inviting them to send from among their patients in moderate circumstances such as had incipient phthisis, and the circulars stated that those patients who desired to be under the care of Dr. Bowditch, after admission to the Sanatorium, should apply to him at the examining office in Boston on Wednesdays or at Rutland on Fridays, and that those patients who desired to be under the care of Dr. Clapp should apply to him at the examining office in Boston on Saturdays or at Rutland on Mondays. As we were known to represent the two schools of practice, this was equivalent to the announcement that those patients

who desired the homoeopathic treatment might apply at the office on Saturdays, etc., and those who desired the other treatment might apply on Wednesdays, etc., although the word "homoeopathic" was not used in the circulars or reports of the institution. Those who did not care what treatment they had could apply on either day, just as it happened, or at their own convenience.

So far, we have had on the homoeopathic side about four-ninths of the total number of patients in the Sanatorium. Until about one year ago this total number was 175. During the past year it has been 250. This month our Legislature has voted a further increase to about 400 patients when suitable additional buildings, to cost $150,000, can be erected.

(The "homoeopathic side" is a figurative expression, the patients of both schools being mixed up in the wards, and occupying beds just as they happen to come in.)

We are afraid that the latter increase is just now premature and is not warranted by the present number of applicants in the early stage of the disease, although later the increase should come. Instead, we think there is now a greater and even a tremendous need for "homes" for advanced cases with little or no hope, in each county near their residences.

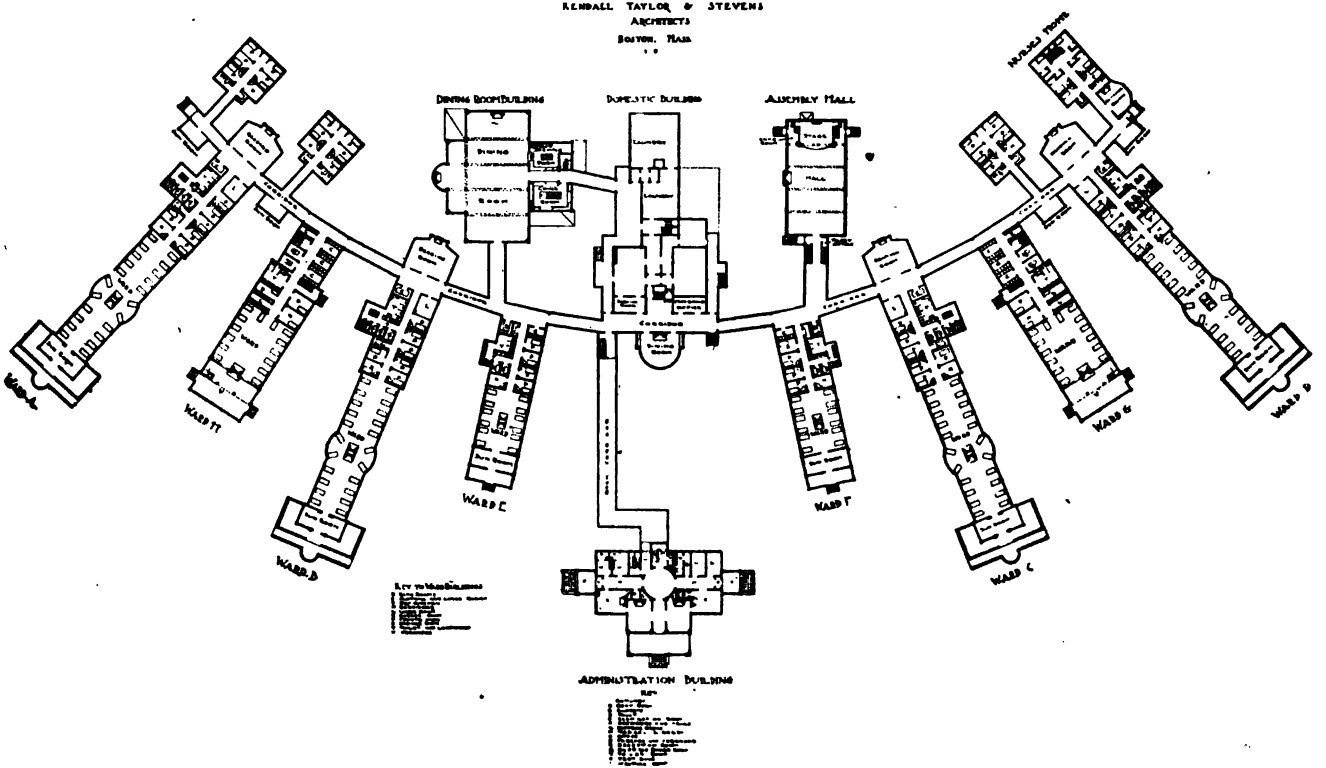
The duties of Dr. Bowditch and myself as Examining and Visiting Physicians were to ascertain the physical fitness of applicants for admission, to visit the Sanatorium one day each week, to have supervising charge of the medical treatment of patients while there, and to decide the duration of their stay in the institution. As assistants we had well-educated young physicians who lived in the Sanatorium and ably carried out all the details of the treatment. My assistants have been Dr. D. P. Butler and Dr. George N. Lapham. The understanding between us and the trustees from the beginning has been that when sufficient time has passed to enable the machinery of the institution to get into thorough good working order, Dr. Bowditch and I are to retire and the medical management thenceforth be carried on by the resident staff, as is the custom in insane hospitals and other State institutions. This change will probably soon be made.

As to the class or grade of cases to be admitted, it was decided to take as far as possible only the *incipient;* but if enough of them did not apply to fill up the beds, the next grades would have a chance. During the first six months, while the hospital was slowly filling up, we had opportunity to test the treatment on all classes of cases comparatively. But this was temporary. The circular announced that "in no sense is the Sanatorium to be considered as a home for the hopelessly

BLOCK PLAN OF THE STATE SANATORIUM

RUTLAND, MASSACHUSETTS

KENDALL TAYLOR & STEVENS
ARCHITECTS
BOSTON, MASS



MASSACHUSETTS STATE SANATORIUM—RUTLAND, MASS.

sick; for, great as is the recognized need for homes of refuge for advanced consumptives, such service is manifestly incompatible with the even more needed service of rescuing lives that be saved only by sanatorium treatment." In other words, if we should accept many far advanced cases, we should soon convert our curative institution into a common consumptives' home, to a great extent, where the patients are mostly engaged in a daily contemplation of approaching death. They would not get well themselves, and by occupying the beds would crowd out and thereby prevent the recovery of many curable cases. We should substitute a death-house with its hopelessness, for a recovery-house with its buoyancy; for, contrary to the pre-conceived theoretical opinions of many who have never seen them, sanatoria for incipient cases are often among the most cheerful places in the world. Feeling their own improvement and seeing many about them getting well, the patients are generally happy in spite of their enforced absence from home, the separation from family and friends, and the idleness from work which they can generally ill afford.

The standard for admission with us, although fairly constant, has not been invariably the same; for it has depended to some extent on the changing number of applicants, since the institution is full all of the time. Our principle has been to select from those who apply such as are most likely to recover, or at any rate to improve, and that in the shortest time. This principle serves to provide the greatest good to the greatest number of citizens of the State, even if it now and then brings hardship to an individual. For example, if, in our judgment, an applicant might be cured at Rutland, but if his cure would require two years' time, it would be manifestly more productive of good to the community at large to reject his application, if by so doing an opportunity would be presented for accepting in succession four incipient cases whose cure could probably be accomplished in six months each. We never claim that because we reject an applicant he is incurable, but practically that has been very often, if not generally, the case.

We urge physicians to send patients as early as they can, because, of course, the cure of such is easier, quicker and surer. Not that it is impossible to cure these cases at home, but that unless the home physician is pretty well posted in the modern treatment of phthisis, and is able and willing to spend a great deal of time in instructing the patient and in keeping a close watch over his habits and method of living (which is hardly likely if the patient is in poor or moderate circumstances), and unless the patient is properly situated and can and will obey orders strictly, the chances of recovery even of incipient cases

are none too good. To cure such, as a rule, requires on the part of the physician, skill, patience, firmness, and constant watchfulness. An almost military discipline mixed with kindness, is essential to success. I do not mean that consumptives will never get well if the physician lacked any of these qualities, for sometimes even a spontaneous cure takes place; but a large—yes, too large—percentage of failures would result, and the greatest possible success would not be obtained.

A few statistics are appended, showing the results of treatment of patients in my service during the four complete years, the present (fifth) year not being finished until September 30. The report is a composite one, being made up from the four annual printed reports to the Governor and Council. Further statistics, not here presented, show that of those discharged as apparently cured a very large majority stay cured.

The word incipient, as here used, includes some cases that some physicians would place lower down in the scale. If only the best grades, or "truly incipient" cases were counted as such, the percentage of apparent cases would rise to about eighty.

No wonder that those of us that have seen such very remarkable results of the sanatorium treatment in contrast to those of years ago have become very enthusiastic. The great majority used to die. Now the great majority live.

Statistics for four years in Dr. Clapp's Service.

Stage of the disease.	Apparently Cured.	Improved.	Not Improved.	Died.
Incipient cases (298)	196	91	11	..
Mod. advanced cases (162)	31	93	36	2
Far advanced cases (28)	1	10	16	1
Totals (488 cases)	228	194	63	3

Percentages from Above Cases.

Incipient cases:		Far advanced cases:	
Apparently cured	66— %	Apparently cured	3+ %
Improved	30+ %	Improved	36— %
Not improved	3+ %	Not improved	57+ %
Moderately advanced cases:		Died	3+ %
Apparently cured	19+ %	All considered* cases:	
Improved	57+ %	Apparently cured	46.72%
Not improved	22+ %	Improved	39.75%
Died	1+ %	Not improved	12.91%
		Died	.61%

Average stay of the 488 cases was 5¾ months.
Number who stayed more than one year, 43.
Of 488 patients, the number who gained in weight was 470.
Average gain in weight was 13½ pounds.
Largest gain in weight was 49 pounds.
Of 488 patients the number who lost in weight was 18.
Average loss of weight of these was 4 2-3 pounds.
The number of patients in my service at end of fourth year was 118.

*Those who remained more than one month.

DISCUSSION

J. P. RAND, M. D.: It gives me great pleasure to say a word in the opening of the discussion of Dr. Clapp's paper for if there is anything of which we are especially proud, it is of our State Sanatorium, and of the results it has accomplished.

Notice, if you please, the statistics, which homœopathy has made under Dr. Clapp and his able assistants during the first four years, 488 cases, and only 3 deaths—288 of those cases apparently cured—194 cases actually improved and only 63 cases in addition to the 3 which died, who absolutely failed to respond to treatment. And this, too, in the very heart of Massachusetts which was formerly supposed to be the very worst climate possible for cases of this kind.

Notice again the percentage which Dr. Clapp has been able to show from the above record—46 per cent of all cases apparently cured—39 per cent actually improved, only 12 per cent who failed to respond to treatment, and less than 1 per cent who died.

But that is not all of the results which have been accomplished. The educational value of the Rutland Hospital stands for more cures than the institution itself.

Best of all he teaches his neighbors that consumption is curable and inspires the entire community with confidence.

The medical history of the Rutland institution shows that it is possible for the two dominant schools of medicine to work harmoniously together.

This is the message which I read between the lines of Dr. Clapp's paper, and this is the message which I respectfully commend to your most earnest consideration for the future.

GAIUS J. JONES, M. D.: I would like to know how the diagnosis of these cases was formed?

H. C. CLAPP, M. D.: In the great majority of cases diagnosis was made by physical signs and symptoms that were afterwards confirmed by the presence of the tubercle bacilli. Then we have had some cases, as happens in all sanatoria, which had the proper physical signs and symptoms indicating hæmoptysis, etc., but lacking the tubercle bacilli. If one is thorouhgly schooled in auscultation and percussion, he can very often detect a case of phthisis before the tubercle bacilus appears in the sputum. The presence of this tubercle bacillus implies necessarily a certain amount of advancement of the disease to allow the bacillus to appear in the sputum. You may have millions of bacilli in the chest without sufficient ulcerative process to detach them, there being no sputum or the sputum being catarrhal. The sputum from a

consumptivé shows bacilli on some days and some days not. In most of our few cases which lacked bacilli, the tuberculin test was positive, or hemoptysis was a symptom. If a patient, however, had a prejudice against the tuberculin test, it was not used. If you always wait until the bacilli show in the sputum before making a positive diagnosis, the delay may cometimes lead you to lose the life of the patient.

As to stimulants, as neither Dr. Bowditch nor I believe in them for consumptives we have given no alcohol on either side of the Sanatorium during almost five years, with the exception possibly of a few drops of sherry wine to take off the flat taste of egg in egg-nog. In that case the amount of alcohol is so small that it can be disregarded.

As to cod liver oil, we have about the same views. We both of us give very little, almost none, of it; practically finding that if sanatorium patients do not gain on plenty of good nourishing food, the addition of cod liver oil seldom makes any difference.

As to the general feeding, that is one of the key-notes of the whole system of treatment. It is absolutely necessary to feed and even overfeed consumptives, but we do not stuff them to the extent of obstructing the digestion. This power to digest and assimilate must, of course, be considered. Those patients who are exposed to constant fresh air, summer and winter, soon acquire not only ravenous appetites, which they lacked before, but also wonderful powers of digestion and assimilation. Stuffing them is a very different thing from stuffing a poor sufferer who sits around in the house and about the stove, with closed windows.

As to expense, it is not ten dollars plus four dollars. The income, on the one hand, is four dollars per week, and the outgo is ten dollars a week, the balance being made up by the State; but we have many who pay nothing and that reduces the income; so, perhaps it would be more proper to say that the actual amount paid is about three dollars a week, or less.

Our patients have three good square meals; three lunches between the meals, and some of them will drink twenty glasses of milk a day in addition to all their other food. They run from two or three glasses daily, up, most of them averaging perhaps a dozen glasses. Our object is not merely to support them at public expense, but cure them.

As to bathing, we require every patient to take a cold sponge bath all over every morning; and some of them, the stronger ones, are allowed (not required) to get into the bath tub all the year around, even when the temperature of the water is below forty. Of course it takes a good strong constitution to stand that.

A. H. Tompkins, M. D.: Dr. Clapp neglected to answer my ques-

tion with relation to how the exact benefit of forced feeding has been ascertained. Of course we recognize now that the precise value of each element in the treatment of tuberculosis can be ascertained only by comparison of patients on a large scale having that treatment, and then again on a large scale not having that treatment. Dr. Clapp makes it evident to us that forced feeding pretty generally disappears as soon as they have the patient to the place where they willingly take an enormous amount of food. That is to say, they are not urged, still, to take in all that they can; that is, I should judge so. But then it would appear that forced feeding applies to but a comparatively small class; but I wish, really for my own information, to know if there had been any data from which the exact benefit of forced feeding could be said to have been ascertained.

H. C. Clapp, M. D.: I was going to say I do not know any one institution that has taken that position. All authors have found by individual experience that forced feeding is necessary, and they can watch cases, as I have watched cases, where in many years past patients have not been fed, in contrast to those who have ben feed freely. I have watched hundreds and my experience has been those who have been fed freely do much better; and that is the universal experience of others.

PNEUMONIA IN THE AGED

JOHN PRENTICE RAND, M. D.
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PNEUMONIA is always a serious disease. Even among the young and middle-aged it frequently proves fatal, while in those advanced in years it is almost invariably so. Surgeon Banks, of the Marine Hospital Service, has recently made a report to Washington relative to the prevalence of pneumonia at Chicago. Of 5541 deaths in the two months reported, 1186, or 22 per cent of the entire number of deaths, were caused by pneumonia.

The *Medical Annual,* for 1902, quotes from an author who affirms that, of all people in this country who reach the age of 75 in good health, 90 per cent die of pneumonia.

Osler calls pneumonia "the friend of the aged, by which they escape the cold gradations of decay." Had he added the words, "under allopathic treatment," he would have come distressingly near to the truth.

Now, I do not propose to take your time by repeating any of the stereotyped descriptions of pneumonia as they appear in the books. We are all familiar with the physical signs supposed to be present, whether we are able to recognize them at the bedside or not; but I wish to call your attention, in a brief way, to some of the general characteristics of the disease as they appear in old people, and to what I consider essential points in the treatment.

If we look for the typical picture of pneumonia in the aged, we shall almost surely be disappointed. The sharp, initial chill is seldom present, and the physical signs are not characteristic. Many old people have a chronic bronchitis with a jerky respiration in health, which greatly obscures the ordinary evidences of pneumonia. The crepitant and subcrepitant râles are often completely lost. Even the ordinary respiratory-sounds are absent, owing to the inelasticity of the pulmonary vesicles, and bronchial breathing takes their place. Percussion, too, is unreliable, from the bulging and ossification of the costal cartilages; in short, to recognize pneumonia by percussion, at the best, is often a doubtful procedure.

The temperature is as erratic as the other physical signs; it seldom starts in so abruptly or runs as high as in the typical case; sometimes, at the start, it will hardly register above the normal.

There is one symptom, however, which, in varying degrees, is almost sure to be present,—in fact, I should hesitate to make a diagnosis

without it,—and that is, a bloody expectoration. Oftentimes it is scanty —a mere trace—and, unless one is alert, will wholly escape observation; but, usually, it is present and, if it cannot be accounted for in some other way, may be considered as almost positive evidence of the disease.

The most hopeless cases, perhaps, are without expectoration from the very first, and, of course, in such cases, there would be no opportunity to observe the sputum. Loomis says: "When an old person has a slight rigor, followed by febrile movement with great prostration, for which no explanation can be found, pneumonia may be suspected, even though all the diagnostic signs of the disease are absent. After 60, the prognosis is exceedingly grave, and the greater the age of the patient the less his chances for recovery."

Associated with the pulmonary condition we get a general sclerosis of the arteries and of the cardiac muscle. Both heart and lungs conspire to bring about a fatal result. And yet, the disease is not always fatal. In the young or middle-aged, under homœopathic treatment, recovery is almost sure to follow. Even in infants and those advanced in life I have had fairly good results. During the past two years, it has been my privilege to attend at least six cases of pneumonia, unassociated with la grippe, in persons above 70 years of age, and of that number I have lost but two—a death-rate of only 33⅓ per cent, which is about the mortality put down in the books for all cases under allopathic treatment.

Of my two fatal cases, one was a sprightly old man of 86 years, who lived three weeks, in spite of family neglect, but who finally succumbed to weakness caused by a colliquative diarrhœa. The other was a very feeble woman of 82, with an organic heart-disease, who died promptly upon the fifth day, and at no time was there any prospect of her recovery.

The other four fully recovered, so far as the pneumonia was concerned, and, apart from the hastened infirmities of age, are well today.

Let me give you an outline of their history:

CASE I.—Mrs. S., aged 75, and a great-grandmother of three children. Was called to see her April 19, 1901. Patient was not accustomed to take much medicine, in fact, was disinclined to take any, and for two days had been dragging around the house before sending for a doctor. Found her with a pulse of 110, temperature 103, slight cough and no expectoration. Ordered the patient to go to bed, which she reluctantly did, not that she felt able to sit up, but she had a horror of being sick in bed. Two days later, her temperature had risen to 103 4-5, and she had an occasional rusty expectoration of sputa. It

was at this time that she had an acute attack of syncope while sitting erect for an evacuation of the bowels. Her pulse, which had been previously regular, but hard from arterial tension, now became intermittent and at times very irregular. I did not dare to have her sit erect again, while in that condition, and, as she could not void the urine in the horizontal position, I was obliged to resort to the use of the catheter. The bloody expectoration was very slight, and only appeared at all for two or three days. The physical signs were never characteristic. She had some pleurisy and an occasional attack of nausea, but she suffered most from persistent insomnia, which was greatly aggravated by the fact that her granddaughter, who lived with her, and her infant child came down with diphtheria, and were isolated in another part of the house. She was not told the nature of their disease, but she knew that they were ill and she wanted to see them. The greatest danger in her case was heart-failure, and to anticipate this was our constant care. As I have already said, the patient was kept absolutely in the horizontal position, and was not allowed to sit erect for any purpose whatever. This, I believe, was a most important part of the treatment. Had she been permitted to sit erect, I am very sure she would have developed a fatal syncope.

Her remedies were veratrum viride at the start, which was soon followed by bryonia phos. and tart. emetic, for the lungs, with strychnia, digitalis and convalaria for the heart. As a reserve-medicine, I always left with the nurse some tablets of glonoin 2x, and the ordinary aromatic spirits of ammonia, which last I value, both as a stimulant and an expectorant.

The fever never ran higher than on the third day, and at the end of a week was practically gone. There was no critical day, so far as the temperature was concerned. The patient was under-daily observation for about two months, and at the end of four months was dismissed. Since then, she has had no serious illness, and is now, after a lapse of two years, in tolerable health.

CASE II.—Mrs. R., 77 years old, a hard-working woman, who supported herself by her needle. Was called to see her November 10, 1902. The history of the case was similar to the one just reported, only the pulmonary congestion was more pronounced, as evidenced by the so-called "prune-juice expectoration," which continued for about three weeks. Like the former patient, she had an irregular heart's action, and, in addition to the arterial sclerosis, a varicose condition of the veins on both legs, which necessitated the wearing, at all times, of elastic stockings.

Her treatment was largely a repetition of that in the previous case.

For four weeks she was not allowed to leave the horizontal position, and at the end of four months she was dismissed. She is now in nearly as good health as before her illness, though probably not so strong.

The other two cases were not of especial interest. Neither was at any time in imminent danger, and, though one was an old man of 82 and the other a hard-working woman of 71, both made complete recoveries.

I have reported these cases somewhat in detail, not so much because of the successful result as to emphasize some points which I consider exceedingly important in the treatment. Some things must be taken for granted: In a case of senile pneumonia we must not expect to find well-marked physical signs. And, right here, let me say that, during the height of the disease, we should not hunt too persistently for them. To confirm one's diagnosis by an autopsy may be very scientific, and, in a case of a troublesome old person, very satisfactory to the relatives; but I hold that a physician's first duty is to the patient in charge, whose life should not be jeopardized by any attempt to store up pathological knowledge which is not actually needed in the treatment.

Cure your patient, if possible, even though you never make an accurate diagnosis. There will be chance enough to make post-mortems later, perhaps, on somebody else's patient. The discreet physician does not prescribe for supposed pathological conditions, but for his patient; and in case of pneumonia, for instance, it is of far more importance to watch those symptoms which can be readily observed—and that, too, without any injury to the patient—than to be able to locate exactly the diseased area.

The hygienic conditions of the sick-room have much to do with the result. Good ventilation, without exposure, must surely help a crippled lung to perform its part. And this leads me to remark that, in many cases of pneumonia, the inhalation of oxygen is of undoubted value. I do not believe in the old-fashioned flaxseed-poultice jackets. I used to employ them,—in fact, was taught to do so,—but am now of the opinion that they do more harm than good. The changing of them always disturbs the patient, and they must be changed frequently in order to keep them warm. This objection does not apply to the proprietary dressing known as "antiphlogistine," which I have seen used; but I am thoroughly of the opinion that anything that interferes with the free evaporation of the skin is likely to do more harm than good.

If any external dressing is used, I favor the ordinary cotton-batting, or flannel-jacket, which can be thrown away or washed as soon as it becomes offensive.

The inhalation of hot-vapor, with or without medication, I am sure,

is often helpful; but, when employed, the clothing of the patient should be so protected that the atomizer can be used without saturating it.

Good nursing counts for much in procuring a favorable result. The physician can be at the bedside but a short time, at most. He should inspire courage and confidence while there; but it falls to the nurse to supplement his efforts and carry the patient along. To say the right thing at the right time is as truly important as to watch the clock and administer the medicine.

The manner of preparing and serving the patient's food seems like a little thing, but, in a critical case, may be sufficient to change the result. A capricious appetite can sometimes be coaxed into obedience by a dainty service, which would otherwise rebel outright.

I have already alluded to the danger of disturbing the patient with over-examinations by the physician; the same tendency on the part of the nurses should be corrected. Will it help you to prescribe for your patient to have his temperature taken every three or four hours? If not, omit it, and direct the nurse to take it at longer intervals. I am not advising slovenly methods of observation in making the above remark. There may be times when the temperature and pulse should be taken at very frequent intervals, but, in the ordinary case, I am sure that once in six or eight hours is enough.

I have also suggested some of the remedies most frequently indicated in cases of this kind. What not to use, perhaps, is still more important. Whatever the condition or the distress, do not prescribe opium. Opium, I know, will relieve both pain and cough, but it will stop the expectoration and dry up the pulmonary secretions at the same time. If you wish to kill your patient—*secundem artem*—I know no better way than to quiet him with opium.

The coal-tar products are fully as dangerous, but in quite a different way. Opium kills by increasing the pulmonary engorgement, while the coal-tar products act directly upon the heart itself. Cup your patients, if you must! Bleed them, if you will! Strap up their sides with adhesive plaster, or limit the expansion of the thorax with a well-applied bandages but don't give opium or the coal-tar products for the relief of pain in this disease.

The homœopathic materia medica is rich in therapeutic resources for pneumonia. It is surely more than a coincidence that the death-rate is less under homœopathic treatment than under the expectant, and still less under the expectant, than under the medication of the regular school, and this, too, without venesection, or the heroic measures formerly in vogue.

Ancient customs die hard, and venesection is still fondly adhered to by some. Dr. Wm. Porter, of St. Louis, has recently modified the old

method of blood-letting by injecting an equal amount of normal salt-solution directly into the opened vein. Serum-therapy has also been resorted to with negative results.

There can be but one conclusion drawn from recorded statistics, and that is, that homœopathic treatment modifies the disease and hastens recovery, while the regulation treatment of the old school is worse—absolutely worse—than no treatment at all.

But I have wandered from my theme. The successful treatment of pneumonia in the aged depends upon a discreet nurse and an intelligent physician. It also demands a warm room, well ventilated, a comfortable bed and proper nourishment. Medicines and stimulants have a most important place. We should anticipate possible sudden termination of the disease from heart-failure, by keeping the patient in a horizontal position and the early administration of cardiac tonics, while from first to last, throughout the entire course of the disease, we should administer at frequent intervals the homœopathic remedy.

DISCUSSION

H. C. Clapp, M. D.: I wish that Dr. Rand, before the publication of his paper, would change the sentence at the very beginning, in which he says: "In those advanced in years, pneumonia is almost invariably fatal." I think that sounds a little like a quotation from an allopathic source. I do not think Dr. Rand means it. It is just a slip of the pen. I know him well enough to know that he does far better than that in his own practice; and his paper later on disproves this very statement, because he reports six cases, four of which were cured. I do not think that he is to be condemned for the fact that the old gentleman did not get well; and the other patient had the handicap of valvular heart disease, which we all know is a tremendous obstacle to recovery at any age in pneumonia. So I think that he had a pretty good percentage, even though the number from which to derive the percentage was small. Of course it takes large numbers to give valuable statistics as to exact percentages in any disease. The statistics in pneumonia are particularly hard to gather, the disease is so different at times. I am sure we all agree with Dr. Rand, especially those of us who have had opportunities to use both methods, that the mortality under homœopathic treatment is decidedly less than that under the old school.

I am very glad that Dr. Rand emphasized the fact, which is very often overlooked, that pneumonia is a tremendously common disease among old people. He quoted the statement from somebody that 90 per cent of people over seventy-five years of age die of pneumonia,

Now that seems like a pretty big percentage, but if it is too large it is not very much so. Those of us who see a good deal of the disease know that pneumonia is fearfully common among old people, and this very fact ought to lead us to suspect it in many cases which do not have some very obvious and pronounced diagnostic symptoms of other diseases. I think we ought to suspect pneumonia in almost any old person who has chill, fever and prostration, even if these symptoms are not amply sufficient to diagnosticate it positively.

I want especially to call attention to one point that Dr. Rand mentioned, which is not often enough stated—the fact that in old people both the physical signs and symptoms are sometimes blind; skilled auscultators might find them where others might not, but still it occasionally happens that pneumonia has been detected only on the table after death.

Now, one very practical point is this: Since rest is exceedingly important in the treatment of any case of pneumonia, old or young, and particularly in old people, I think that, if we are at all suspicious in this way, it is exceedingly advisable to prescribe rest at the earliest moment. You know when people die of pneumonia the immediate cause is almost invariably heart failure; and I think if we put them to bed at the very beginning and begin the treatment with absolute rest in the horizontal position, we shall, by lessening the strain on the heart, cure a good many of these old cases that would otherwise remain uncured. The oldest person I have ever seen get well was a lady ninety-five years of age, who was in a comatose condition for two or three days; and since that I have not been ready to despair of anybody until almost moribund.

GAIUS J. JONES, M. D.: I could not sit here and allow this paper to go as the sentiment of this meeting as far as I am concerned. In the first place, there is not a symptom or physical sign indicative of pneumonia. The author of the paper does not say whether there was hepatization; he does not say whether the patient had previously had bronchitis; whether she was subject to bronchitis for years, and this was only one of those attacks, a case of broncho-pneumonia, or lobular pneumonia; the extension of the inflammation from the bronchial tubes to a section of the lung, or whether a considerable portion of the lung was involved. There is no excuse for not examining the chest in a case of this kind. The patient can be examined thoroughly without being disturbed; she can lie upon her back and turn or be turned gently from one side to the other, and with an ordinary phonendoscope all the various sounds can be elicited. Gentle percussion could have been practiced without injuring the patient in

the least. It would be rather better, it seems to me, if we secure the proper diagnosis before attempting to treat the disease, when it can be secured in this disease more easily than perhaps in any other. There was no microscopic examination made of the sputum, which could have been made very readily, to see whether the indications found would corroborate the other evidences in regard to the diagnosis.

Again it seems a little inconsistent for the author to condemn the ordinary allopathic treatment when he advocates the treatment which is in vogue to a large extent in the allopathic school. The great cry in regard to pneumonia is that of heart failure; and for that the patient must be supplied with nitro-glycerine and strychnia.

I have practiced medicine for quite a number of years. I have never given a dose of strychnia or nitro-glycerine in the form which the allopaths give it, since I began. And I do not think it is necessary. I would like any one to examine my record of mortality or investigate my history as a practitioner in that regard and see whether my success in the treatment of pneumonia in the aged or young has not been as good as that of my colleagues of either school. It is useless to talk about prescribing the homœopathic remedy if you are giving strychnia and nitro-glycerine in tangible doses. They cover symptoms. They mask the case and produce drug symptoms, and what benefit can you expect from a remedy in dilution, 3 x, or higher, if such drugs are given at the same time?

EDWARD RUSHMORE, M. D.: The interesting paper led me to think of a case which came under my care three or four years ago in the person of an old man ninety-one or two years of age. It was a case of pneumonia. The man made rapid recovery in a few weeks and was treated purely according to symptomatic indications, the remedies being bryonia and later antimonium tartaricum.

BYRON G. CLARK, M. D.: I would like to make one observation in regard to kali bichromicum in pneumonia. Where there is a tendency toward weakness of the heart it is a splendid remedy; it is not often given for those affections; but it has an intermittent pulse in its pathogenesis, and in cases of diphtheria where there is an intermittent pulse a dose of kali bichromicum would regulate that for several hours. In these old people with pneumonia it is one of our best remedies, especially where there is a tendency toward that weakened heart; kali bichromicum is not generally thought of as a remedy in this connection.

J. P. RAND, M. D.: Mr. Chairman, I do not know that I have anything more to say in particular. I did not present the paper as an

ideal treatment of pneumonia. I am aware that I have my limitations, and the paper is justly open to criticism. I wish, however, to state that the doctor perhaps misinterpreted me in one respect: I did not advocate *no examination* of the patient; not by any means. I said "over-examination" of the patient; and there is quite a difference between "no examination" and "over-examination" in any case. I have seen patients that have been fairly put into their graves because the doctor wanted to find out just which corner of the lung that was diseased. He listened every time he came! It seems very nice and perhaps very wise to the family to have the doctor take all that interest in the case. But when that patient needs rest and that patient's life depends upon the rest, even to examine, as the doctor suggests, with the phonendoscope, turning her gently from one side to the other, I do not think is justifiable. When I get to be an old man about to shake off this mortal coil I do not wish to have any young doctor examine my lungs every day or take my temperature every three or four hours for the sake of some case that he may have ten or fifteen years later.

In regard to the use of the nitro-glycerine and the strychnia in material doses I plead guilty and I am very proud to do so. I have seen, I know, excellent results from those remedies given in that way. No man is too old to learn, and I advise the doctor to give them a trial before he completes the practice of medicine or speaks too strongly against their use.

BAD NAUHEIM—SOME OBSERVATIONS

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It was in the month of September, 1902, that my professional duties called me to Bad Nauheim, Germany. I had been somewhat acquainted with the artificial waters (made in imitation of those of Nauheim), and their effects upon certain of my nervous patients, during the year preceding my visit, and I went to the springs themselves with a special feeling of interest and confidence. Professor Theodor Schott was consulted about my patient, and gave daily advice concerning the use of the baths, exercise, diet, etc.; and at the same time he most kindly directed me, under his supervision, during our stay of nearly five weeks, in the "Schott Treatment," which has made him famous throughout the world. I wish now to report on the place, the waters, and the results, as observed by me.

One should know of the place that it is about twenty miles from Frankfort, about twelve miles from Bad Homburg, is mostly composed of hotels and *pensions,* and may be said to depend upon the springs for its reputation and existence.

Of the springs, there are three used for baths, each of which is a gusher, in the sense that it spouts above the surface of the ground. There are other springs, four in number, but they are used only for drinking, and not being used for baths, are not considered at present.

What strikes a visitor first and always, is the water rushing to get out of the ground; he sees it overflowing the well-tubes at a height of ten or fifteen feet above the ground; and is told, that one of them, if allowed, would throw a stream more than fifty feet in the air. The cause of the spouting is carbonic acid gas, which mixes with the water low down in the ground, and pushes it along to an outlet; and, for this reason, the wells are not termed artesian, as they would be if the water rose above the earth's surface in seeking its own level. He would next note the bubbling and bursts of carbonic acid gas as it escapes in great volume from the spouting waters. He would note also the vapor, in cool weather, rising from the springs, showing how much warmer the water is than the air; in fact, it is nearly the body temperature. He would see that the spouting, bubbling water is beautifully clear, but that it is yellow and muddy in the basins into which it falls, and his knowledge of chemistry would teach him that, as the carbonic acid gas escaped, some of the iron and lime salts would not remain in solution, and would be precipitated in the basins, giving the appearance

of muddy water. Under other conditions the lime would form the strangely shaped rock masses, like stalagmites, which make a "rockery" for plants near at hand. The last thing he would note, perhaps, would be that these three springs are close together, so that one could almost spatter the water from one spring upon the other two springs.

He would next learn that beneath his feet, not far from the springs, are large storage tanks into which some of the waste water runs and is used for certain baths, after some or all of the carbonic acid gas has escaped. He would not discover one more thing about the water, if he should walk about a mile from the springs, that considerable of the unused water is evaporated, leaving table salt, as has been done for centuries; and this residue is used, by adding one or more quarts of it to a tubful of water, to produce a bath stronger than an ordinary brine bath.

Until thirty years ago the waters were regarded as simply saline and warm; that is, table salt could be made from them, and pleasant baths could be taken in them. But, as Professor Schott has stated in the *Lancet:* "A new era opened when in 1872, the late Professor Beneke showed that by the use of the Nauheim baths relapses from acute articular rheumatism could be long averted or altogether escaped, and that it is possible to have recourse to balneological treatment in cases of cardiac disease, not only without danger, but with curative effect, ensuring even such effectual removal of recent endocardial exudation as to secure immunity from permanent organic valvular damage." After this time the brothers Schott studied the waters, experimented with them, and then published articles which attracted considerable attention. Soon afterwards, Dr. August Schott died, leaving Dr. Theodor Schott to carry out their mutual studies and plans. He formulated methods of treatment by means of the waters, for various diseases and conditions; and these methods are now known as the "Schott Treatment." The success of Professor Schott and his imitators has made the name of Nauheim known throughout the world. About half a hundred physicians now reside and practice in the town; and over twenty thousand visitors go there during the five or six summer months. The great number of invalids has made necessary as many as three thousand baths in a day, and has caused the erection of one bath house after another until now there are seven of them; and the season has been extended from some time in April until the last day of October. Even with this extended season, and with the government bath houses closing before the first of November, there were new patients arriving the last week of October, and asking for treatment and relief from their sufferings at that late day. A visitor finds the autumn

weather rainy, cold and "raw," and he will acknowledge that it is very prudent on the part of the government to close the bath houses in October and not give additional opportunity for bronchitis and other ailments to attack and send to their graves those who have gone there for their restoration.

Now, what are the valuable elements of the Nauheim waters? Professor Schott told me he counted them as four: First, the salts; second, the warm temperature; third, the carbonic acid gas; fourth, the force of flowing waters.

Some of these elements are found in other waters elsewhere, but nowhere else in the world are they combined in such valuable and perfect proportions; and it is the combination which gives them their great advantage over other waters.

Of the first division, the salts, there are practically three—sodium chloride, calcium chloride, and iron.

The invigorating effect of salt baths or sea baths has been known as long as men have taken baths. The value of the lime salts, especially the very soluble calcium chloride, has not been recognized until comparatively recent times. It is this salt which forms a very large com- of the "mother lye" which is left after the crystallization of the sodic chloride from the concentrated waters, and which is added to the baths for certain patients. It has been of additional interest to read lately (Boston *Herald*, February 23, 1903) that Professor Loeb, of Chicago, has found lime salts of benefit in irritable conditions like chorea and sleeplessness.

Of the second division, the warmth, it is a very great advantage that the waters flow from the earth at exactly the temperature most desired; if warmer, they would need cooling; if cooler, they would need warming. The temperatures vary from 80 to 95 degrees.

The subject of the third division is the carbonic acid gas. This element is perhaps the more important than any other. It is certainly the most noticeable when taking a bath. The large bubbles of the gas can be heard rumbling on their way through the pipes. They hurry to the surface in the tub and explode in great numbers and volume. The small bubbles suggest glass of "vichy," or plain soda, at a soda fountain; and when one is in the tub, they attach themselves, by thousands, to every part of the submerged body.

The effect upon the skin of the carbonic acid gas is very marked. Mills (Physiology, quoted by Baruch) speaks of it as "that unrivaled stimulant to involuntary unstriped muscle fiber." Again, he says, "So marked is the effect of this skin tonic that in severe cases of dilatation the almost incredible result is obtained of causing the apex

actually to retract three-quarters of an inch toward its normal position in a single treatment. Not only are the pulsations of the heart greatly lowered in frequency, but they are, apparently, increased proportionately in power, so that the work which was previously altogether too much for it is performed with comparative ease and comfort. In fact, the results obtained from this simple remedy sound almost too good to be true, and would hardly be believed if the repeated experience of competent clinicians did not almost unanimously verify them."

Of the fourth division, "The Effect of the Flowing Water," all is included in the "Strom-sprudel," or "Flowing effervescent," bath. A comparatively small number are allowed to enjoy it, however. When this is taken, the bather steps into the water, as soon as the tub is filled, and the stream continues to flow or spurt, direct from the spring, through an inch or an inch and a half pipe into the tub, near the bottom, and envelops one in a rushing tide of salts and carbonic acid gas that causes one to feel more exhilarated than seems possible, if one has never tried it. The five, ten or fifteen minutes of the bath are never tedious, and one feels ready for the world and its responsibilities when emerging from its rejuvenating and vitalizing flood. One feels so good while taking it, that the words a "Strom-sprudel" bath bring back always to one a very pleasant and happy memory. It is like many other things, however, in that it may be dangerous, if not used intelligently. It has been known to cause the death of bathers, who should not have attempted it, and it cannot now be taken by a visitor, or given by a bath attendant, except upon the written prescription, for each bath, of a recognized, practicing physician in Nauheim.

In concluding this portion of my subject, the words of Professor Schott himself will be interesting: "The warm baths act in their own peculiar manner on the organism as a whole. Increased tissue change seems to be induced by an increase of the oxygen absorbing power of the cells, and hence follows a sense of the need of rest and sleep as the immediate consequence of the bath, as well as influences speedily brought to bear on the nervous system as a whole. The increased tissue change calls for great care on the part of the physician, for an excess of bathing seems to induce an excitable state of the nervous system with all its resulting, pernicious after effect: Sleeplessness, loss of appetite, and consequent loss of strength. The principal changes which ensue in the system, and in the functions of the several organs, are, that the heart beats more slowly and strongly, the pulse becomes full and increases in force, and the blood pressure may rise to the extent of 20, 30 or even more mm. of mercury. The breathing becomes regular and quiet, and the vital capacity of the lungs increased. The

action of the skin, in cases in which it is of importance that the functions of this should be stimulated, is greatly increased. While the patient is in the bath it becomes flushed, and a feeling of comfort and warmth ensues which may even rise to one of an agreeably intoxicating character. Almost invariably the excretion of urine is increased. Exudata are absorbed from the joints and body cavities and especially from the peritoneum, pericardium, pleura and pelvic organs. This latter action, and that on the valves of the heart, can only be explained on the theory or reflex action produced by influences bearing on the terminal nerves." "The simple thermal baths exercise a beneficial influence on all painful pathological conditions which involve symptoms of nervous excitability, such as neuralgia and kindred affections, especially ischial and intercostal neuralgia and similar affections of other nerves in which other remedies not only frequently fail to produce an effect, but also not unfrequently are open to actual objection. Acute rheumatic affections may be found to subside rapidly through the action of the thermal salt bath." He speaks also of the benefits derived from different forms of baths, in "tabes, hysteria, neurasthenia, muscular and articular rheumatism and in gout"—also in "chronic metritis and other uterine diseases"—in addition to "cases of chronic heart disease, whether due to valvular lesions or to other causes," for the successful treatment of which Nauheim has become famous.

Now that the four divisions of the subject of the waters have been considered, let us turn to another element of the "Schott Treatment," the Resistive Movements. These movements are regarded as very important by Professor Schott. They appear to most persons who are acquainted with medical gymnastics as similar to certain of the Swedish movements, well known in this country, and adapted by him to heart diseases; but he claims they are different, and originated with him. They are about twenty in number and are well described and illustrated in a book by an English author, Bezly Thorne. The movements are intended to give exercise to each extremity and to the trunk, and to give it in such a way as not to strain a weak heart. They are given at Nauheim by skillful operators, in one's room, and never at the bath houses. Great care is shown by them, by watching the pulse, the respiration and the face, and by enforcing regular breathing (never allowing it to be interrupted by the exercises), and by rest between each of the movements, and rest afterward, never to allow the pulse rate to be increased, or the invalid to become fatigued. These two requirements, concerning the pulse rate and fatigue, mean, in many cases, practically no resistance, yet, given in this way, good results are manifested. I have known of patients in Nauheim, who could not take baths on account of their weak condition, who looked

forward with great pleasure to the relief from dyspnœa they experienced each time the exercises were given. In certain other severe cases Professor Schott did not give the movements at first, but depended upon the baths entirely for beneficial results. While he does give medicines, it interested me to observe that a bag full of heart medicines, brought by newly arrived patients, might not be opened, and the cure might be made by baths, movements and driving and walking in the open air.

While the baths and movements are generally considered as comprising the whole of the "Schott Treatment" in heart diseases, there are other factors which are important and demand notice. For instance, he is particular about the dietary of each patient. The use of liquids is often limited as to quantity and time. There was no invalid, within my knowledge, who was allowed coffee, tea, tobacco or beer, although some were permitted to take wines or spirits, under certain restrictions; soups were not favored; some meats and vegetables were not allowed, the restriction being based on their indigestibility or their fermentability, and the danger of impeding the heart's action. Invalids are expected to be in the open air as much as possible. It seems as if the architecture of the Nauheim building had been planned for their convenience. One sees everywhere, in hotels, and pensions, small balconies outside the windows of each story, where the occupants of the rooms may sit or lie in the open air, and still be at home, an idea in construction that impressed me very favorably. Wheel chairs may be rented by the week, and a person employed to push them; and it interested me to see the provision made for them at the street crossings, where the city has cut down the curbstones or has put in an iron inclined plane over the gutters, to make the pathway smooth for invalids in wheel chairs.

Carriage driving is enjoyed by very many, and the prices are reasonable and regulated by the city. A large proportion of the bathers are obliged to return to their houses in carriages, even when they have walked to the bath house, out of consideration for the heart when it is still influenced by the bath.

The streets and walks are cared for very diligently; even the paths through the parks and woods are swept daily and kept free from falling leaves in autumn. There were settees in all directions, ready for use by those who were weak or tired.

There is a tennis court belonging to a tennis club on the edge of the park, and in a very accessible location. It was interesting to see the Germans play, for they showed less skill in the game than the English or American visitors, and their pronunciation of "Luf fivteen" and "Luf tirty" was truly Germanic.

For those who enjoy rowing there are boats on the "Teich" or pond. The boats possessed the advantage of safety rather than speed. The oars were not like anything ever seen in this country, and they would never be selected by an oarsman when entering a race! It may be that consideration for the ducks and geese on the pond led to the selection of the boats and oars, for the stately progress of the birds would never be hurried much by any possible efforts of mischievous children.

The Kurhaus, or Casino, is a center for visitors. It contains a restaurant, a reading-room, an entertainment hall and other rooms, and a band of music plays on the terrace beside it every afternoon and evening. The music is well chosen and well played and can be heard for a long distance in the neighborhood of the park by those who may be unable to attend the concerts. It is no wonder that hundreds of people visit the vicinity of the Kurhaus daily and enjoy the many pleasures offered them there. One feels that the government, and also the people of Nauheim, desire to keep their city clean and attractive, and to do all in their power to satisfy visitors and to induce them to return and to bring others with them.

If any physician should wish to try the baths in his own practice he may prepare them artificially by following the directions of Dr. Charles Gatehill's book, or in Cowperthwaite's Practice, or in Volume IX, page 537, of Cohen's System of Physiologic Therapeutics, or by obtaining certain tablets now on the market. He must bear in mind, however, that the baths are given in Nauheim in varying strengths of salt, and varying temperatures, and with "pauses," all depending upon the expert judgment of the specialist in his daily observation of the case. If the practitioner, without special acquaintance with the baths, should fail to obtain satisfactory results, he should not condemn the method, but only his own lack of experience. In fact, all the patients who go to Nauheim itself are not so fortunate as to go away cured, but, on the other hand, a good many of them, who seem to be at the threshold of death's domains, are privileged to turn back and enjoy once more the pleasures of friends and home.

In conclusion, I believe that a patient with chronic enlargement and valvular disease of the heart, who has tried in his own home all that physicians can do for him, and who finds himself losing ground, should go to Nauheim at once and have the treatment as provided by Mother Nature in the warm, health-giving streams. And I believe the physician who has heard of the efficacy of the Nauheim waters and does not send his patient there before it is too late is failing in his duty to the sufferer who seeks his advice and guidance.

THE BIANCHI-SMITH METHOD OF OUTLINING THE HEART; A DEMONSTRATION*

GEORGE F. LAIDLAW, M. D.

NEW YORK.

I will present a simple method for outlining the area of the heart. You know the method of determining the size of the heart depends upon percussion; you are also familiar with the old style of auscultory percussion. Now it is not easy to outline a heart if the chest wall is thin. I find it a matter of considerable difficulty, except in a case now and then which presents a fair outline.

This is a modification of the Bianchi method. When Bianchi introduced his phonendoscope some six years ago he revived the old method of outlining an organ by auscultory percussion; but instead of putting a stethoscope or phonendoscope on the chest and tapping with the finger to determine by change of sound where the organ is, he adopted the more delicate method of scratching the skin with the end of his finger. That was taken up by a German named Smith. Finding that the results of such scratching were not satisfactory, he devised a little brush, like a mucilage brush, and that is the method I will show you, the Smith modification of the Bianchi method of outlining an organ.

I will now show you how we are able to obtain an accurate outlining of the heart by this method. It works just as well upon the dead body as upon the living. I have here four hearts, and I will show you the outline that I made of those hearts before removing the hearts from the body, and compare them with the outlines present.

This is the heart of a patient who died of advanced interstitial nephritis, with considerable hypertrophy—a regular "beef heart." This is the normal position of the heart as it lay in the chest, this being the aorta and here the pulmonary artery. We made upon the chest an outline of the heart, which you see on this diagram.

Place the heart over the outline and you see we have a pretty close match. You can do more than that. You can see here, outlined, we have two large circles and two small ones. These two small circles to the right correspond to the auricles; the larger, to the left, correspond to the ventricles. With this method you can outline or distinguish the auricles and the ventricles on the chest wall. That ap-

*Dr. Laidlaw, in giving an account of the method, accompanied it by a practical demonstration on the living subject.

peared to me incredible when I first read it, but on testing the method, outlining and removing the heart, I find to my surprise that in every instance we come within one-half, in many instances one-fourth and one-eighth of an inch of the true size of the auricles and ventricles, excepting the left auricle, which lies back, behind and deep, and is difficult to outline; but the two ventricles can be obtained quite precisely.

Here is the heart of another case of chronic Bright's disease. There, on the diagram, is the outline; this is the apex, and this is the heart arranged in its natural position; there is the outline of the heart after death. These are two large hearts. I shall now show you two smaller ones.

In this case this point on the diagram represents the sternum and ribs, the left and right ventricles and the right auricle. This is the heart, with its apex toward you; that is the outline made.

This is another small heart which I hold in its natural position, with the left ventricle above, and you can see how it matches its diagram.

Now, whether it be true or not that with this method you can outline the different auricles and ventricles on the chest wall, you certainly can get an outline of the whole size of the heart, and especially its right and left border, which are so important to determine in heart lesions, in acute fevers and in chronic diseases attended with dilatation, and the method is very simple and very easy.

The instrument with which this is done is the ordinary phonendoscope, with a modification. Smith advises a bristle brush for scratching; insert the valve in the top of the phonendoscope. By opening that valve and admitting air in the top the scratch sound of the brush is more distinct to the ear. A man who percusses and outlines any organ and trusts to his memory as to the size of that organ will do careless and slipshod work. The only way to do accurate work is to outline the heart on the skin. This is an ordinary phonendoscope for auscultation. If you want to outline an organ, put on this attachment, which gives you a small point of contact with the chest. I will now map out the heart and pass the instrument about.

We select the left fourth intercostal space because we are then always over the heart, unless it is a case of dextra-cardia. We select the fourth intercostal space, which, under nearly all pathological conditions, is over the right ventricle, in the para-sternal line, which is midway between the end of the sternum and the nipple. It is well also to determine the median line.

Placing the stethoscope in the fourth intercostal space, midway between the para-sternal line, you brush the skin with the brush [*The*

speaker demonstrates.] There! You hear the sound changes, and you make a mark. That is the lower end of the right ventricle.

Placing the stethoscope just above that, you brush outwards until the sound changes, and you find it about *there.* Then you get the upper limit of the right ventricle; you find it *there.*

Here you find another change of sound; *that* is supposed to be the right ventricle.

That is the left ventricle. You notice the left ventricle lies over the right. It is anatomically incorrect to speak of the right and left ventricle. The whole under surface of the left ventricle is formed practically by the upper side of the right ventricle. That I have observed over and over again, in the *post-mortem room,* since my attention was called to it some two years ago by the devisor of this method.

Now put on the crown, this being the resonance method. If you place it right over the breast-bone you can get the limits of the breast-bone. That will interfere with the limits of the heart, which lies beneath; so, place the stethoscope at the right border of the sternum and come down to the fourth inter-space, and you will get the left auricle. It is better, I think, to put on the right auricle first, in the fifth space. Place your stethoscope there, and you find the change of sound out here. Then coming up in the fourth space, you find a change of sound about there; that puts 4 on the left auricle.

Now, it is said you can go above that and mark out the arch of the aorta. I have never had sufficient confidence in my outline in hearing the arch of the aorta. The breast-bone is rather thick, and one practically knows the arch of the aorta is at the angle of the sternum; and it is a great temptation to imagine that you hear the sound right there. In some cases I imagine I hear it distinctly. However, you can tell the left, right, upper and lower border of the heart; and it is a method that is so easy that a student learns it in one or two applications. A doctor will learn it if he once tries it, and it is one of the most useful methods in the practice of physical diagnosis.

Now, as to error. Can you make a mistake? Like any other method, that depends upon a certain amount of personal skill. It takes a little practice before a man is absolutely certain of his outline. I should say also that this method has been rejected by most of the authorities on physical diagnosis. Most of the opinions I have read of it were unfavorable.

Now, the mistakes are two. It is claimed by the opponents of this method that when you place your stethoscope over the heart and scratch out *here,* there comes a place where you do not hear the sound any more, by mere distance. That is so. There is a circle around the

stethoscope within which you hear it plainly and without which you do not hear it.

It is also claimed that if you put the skin on the stretch it is like a stretched fiddle-string, and the sound is much stronger than where the string is loose or elastic.

There are the two sources of error a man must keep his eye out for. But my claim is, having those two sources of difficulty, look out for them. Have the patient place his hand up here, I stretch the skin and you find the pressure way up to the shoulder. Incline the shoulder forward and do not place the skin on the stretch, and get the fiddle-string action. With that precaution I have found my outline to be correct.

As to change of sound, it stops somewhere, and it may be you are just far enough from the stethoscope that you do not hear. Move the stethoscope down and the area of sound will move as you move the stethoscope; if, on the other hand, it is the border of an organ, that sound will remain, whether the stethoscope is up here or there. That test is readily made, I find, by practice. So, if a man will avoid those two sources of error you have in that method one of the simplest, one of the easiest, one of the most precise and readily used methods that you can possibly have for determining the size of the patient's heart. I will not dwell upon the kinds of diseases in which we find it necessary to outline the heart. That is a deep topic. Certainly in all valvular diseases, acute fevers, chronic and exhaustive diseases; and dilatation which is an early sign of constitutional trouble and is important to recognize and treat.

One more word, and that is to present proof that the outline that I make upon the chest corresponds to the organ that lies beneath. The claim is made by Soler, Haircourt and others among the German clinicians, that what you hear is simply a stretched skin, or "scratch-sound," which has no relation to the organ that lies beneath. Now, I saw a patient who had disease of the pancreas accompanying liver trouble. This diagram represents the parting of the ribs, the border of the hypochondrium; this the hard edge of the liver, which you can plainly feel with your fingers by pressure. I place my phonendoscope *here,* scratch outwards with my brush, with my eyes closed, making a mark where the sound changes; then, opening my eyes, I made an outline covering this absolutely, by palpation, and the outline corresponded exactly with this that was palpated through the abdominal wall. I claim that is proof that the outline you get does bear relation to the outline of the organ that lies beneath, because it would be practically impossible for me to follow the curves of that outline my mere chance or second-sight.

You do not need a phonendoscope to do that. You can do it with an ordinary stethoscope. The one I generally carry has *this* attached to it. The obstacle is that it is rather large to get delicate outlines. It is what I generally carry to detect isolated heart-murmurs. It is very good for listening through cloth and in auscultory work about the lungs, but if you want to pin an organ down to special diagnosis it is too large.

With a common old stethoscope and the end of your finger for a scratcher, you can make just as good an outline as that, with one exception: when you get over the breast-bone and right border of the heart, you are a little uncertain. That instrument is smaller and delicate enough to make the distinction between the edge of the breast-bone and the edge of the heart. I find for the right border the phonendoscope is more delicate. For the left border almost any stethoscope will do.

DISCUSSION

THE CHAIRMAN: In speaking of Dr. Laidlaw's interesting demonstration, I would like to say that I have used the method considerably at the Metropolitan Hospital. I have seen Dr. Laidlaw outline the heart and make his markings. Until you try it you really do not appreciate what a nice thing it is. The ordinary percussion of the heart is unsatisfactory, no matter how expert the man who does it may be; the percentage of error is great and the further the heart is removed from the normal condition the greater the error. In this method we have something that is more accurate than any other, excepting possibly an X-ray picture or an X-ray examination, which is not always convenient or acceptable. You will be surprised at the difference in sound that you get when the brush or the finger (whatever you use) changes from over the area of the heart to the lung tissue. You can outline any of the organs that way: the liver, for instance, and the spleen. It is the difference in sound that you get between one part and another that gives you the outline.

I would like to call for discussion on this. I see several people whom we all know; and if they have not tried the method or had any experience with it we would be very glad to have them ask Dr. Laidlaw any questions they may see fit.

CLARENCE BARTLETT, M. D.: May I ask how Dr. Laidlaw has gotten along with patients with very adipose chests, I mean with very large mammae? They really are the most serious obstacles we have in chest and heart examinations.

GEO. F. LAIDLAW, M. D.: This method has that weakness. The fact is that the chest-wall makes it more difficult to bring the responses

through to the ear; and the very thick and edematous chest wall is an obstacle in determining what lies beneath, and sometimes I have found it almost impossible to determine definitely on account of the heavy, fat chest. With the female breast, that can be drawn aside or upward toward the shoulder; the area extends below the breast line. The outer side you can get pretty well; that has not proved such as obstacle as general adipose tissue.

A. B. SCHNEIDER, M. D.: Will Dr. Laidlaw tell us whether the case presented is normal or not? Whether he has satisfied himself that this man has a normal heart? Our teachings and our observations have both taught us that the apex of the heart, for instance, is formed by the left ventricle. In the case presented as outlined, the right ventricle forms the apex, extending beyond the point of the left some little distance; and naturally conforms the outline to that of a heart presenting dilatation of the right ventricle. I recognize the difficulty of outlining the heart under any circumstances; and also the difficulty of presenting a perfect outline; but it occurs to me, having in mind the fact that the mitral valve is situated about one inch outside the left edge of the sternum, that the junction of the left auricle with the left ventricle as presented in the median line of the sternum, would also be somewhat at fault; ordinarily the left auricle, according to our experience, extends beyond the left edge of the sternum. Is it possible that the heart in the patient presented is an abnormal one?

GEO. F. LAIDLAW, M. D.: The criticism is fair. That is one point in the method which is somewhat puzzling. I have explained it to myself by believing that the left ventricle coming down behind the right, you do not get the tone-shadow through upon the skin. As to the location of the valves, in the hurry of the examination I have made a careful outline under the sternum and I often see that the outlines come at the left edge of the sternum, but just as often in the median line; that the mitral valve is invariably at the anatomical point at the left edge of the sternum I would question, as I think there is somewhat of a variation at times, of one to one and one-half inches, as to location. The results given in our text books are averages of many cases, and naturally those averages are made up of variations; and when you examine an individual case you do not always hit the location within half an inch. I am satisfied as to the right and left border. I question, as the Doctor does, the accuracy of outlining the apex as to which ventricle constitutes the apex. I also have some little question in my own mind as to the auriculo-ventricular junctions; and I admit his criticism is fair.

A CONSIDERATION OF THE TREATMENT OF GASTRIC ULCER

WITH SOME REMARKS CONCERNING THE DOMAIN OF SURGERY IN THE HEALING OF THE ULCER AND THE RELIEF OF ITS SEQUELAE.

CLARENCE BARTLETT, M. D.
PHILADELPHIA.

The recently published works of Robson and Moynihan, of England, and Mayo of this country, have awakened an unusual interest in the surgical treatment of gastric ulcer and its numerous sequelæ. The remarkable success attained by these men may well be said to be in danger of causing an ill-judged enthusiasm on the part of the unthinking, and thereby expose to the knife patients whose cases require but intelligent medical treatment. As evidence of this assertion I need but quote from an editorial in the *Medical News* of May 16, 1903, as follows:

"Digestive disturbances have ever been the bane of our people and the humiliation of our profession. What prospect of relief is there in the future for gastric surgery?

"Such men as Mayo, Rodman, Ochsner and others are teaching that practically all of the surgical diseases of the stomach are the product of gastric ulcer. Who will say that Mayo, that master of American surgery, is not a true prophet when he proclaimed that—'We as externists shall soon be able to say to the internist, Send to us your intractable cases of neurasthenia, of hysteria, of confirmed gastric irritability and dyspepsia, and we will at the end of a simple and virtually safe operation hand you the excised ulcer, which you were unable to cure, and which was the causative factor in the condition. When that time comes, and come it will, the surgery of the stomach will have reached its goal.

"The corollary of all this for the general practitioner is that he should make up his mind that those of his patients who have vague gastric symptoms which do not respond to rational treatment may not longer be left to their own devices. Such people usually have ulcers of the stomach or duodenum."

An editorial of this kind is well calculated to do considerable harm among the unthinking and those who are inclined to believe all that is taught by the editorial pen, for editors are like other people and may make mistakes. The idea of operating cases presenting the phenomena of gastric neurasthenia on the hypothesis that ulceration is the founda-

tion of the symptoms strikes those who have treated many cases of these complaints as in the highest degree ridiculous. Sweeping advice of this kind must do an unlimited amount of harm to legitimate surgery It must awaken unreasonable prejudices on the part of medical men, who, recognizing that the writer is certainly mistaken in part, not unnaturally assume that he is wrong *in toto*.

It is my belief that many cases of ulcer of the stomach which are now permitted to go untreated by the surgeon and undergoing unnecessary invalidism, to say nothing of the danger of life. I must say also that when the writings of the masters of gastric surgery are carefully analyzed one finds but little in them to criticise, especially when we recognize that they are detailing merely their own experience. For they see cases the majority of which have not been properly treated by medical men.

The dangerous character of gastric ulcer does not seem to have sufficiently impressed itself upon the majority of physicians. The oft-quoted statement that 5 per cent of stomachs examined at autopsies give evidence of healed ulceration, and the infrequency with which gastric ulcer as the cause of death appears in mortality reports, is largely accountable for this belief.

"According to Lebert, as quoted by Dr. Dreschfeld, death occurs in 10 per cent of all ulcers, 6½ per cent occurring from perforation and 3½ per cent from hemorrhage. Habershon says that perforation occurs in 18 per cent of all cases of ulcer of the stomach, and Brinton in 15 per cent, to which must be added the mortality from hemorrhage, which, according to Müller, is 11 per cent of all cases of ulcer, the average of all authorities being 5 per cent; so that, allowing 15 per cent to represent the mortality from perforation and 5 per cent that from hemorrhage, the mortality of gastric ulcer treated medically is at least 20 per cent. * * * Brinton gives the mortality from all causes in gastric ulcer at 50 per cent."

Statistics of this general character are valuable as representing the prognosis of gastric ulcer as treated by a large number of physicians—the good and bad alike. Bramwell, analyzing 156 cases of his own, make his mortality 5.6 per cent. And this, I believe, will represent the mortality of the disease when treated by men who will force their patients to adopt proper measures for their cure.

Any change of undue enthusiasm in advising resort to surgery on the part of Robson and Moynihan can well be refuted in the opening sentence of their remarks upon treatment. They say: "The treatment of gastric ulcer is at first essentially medical, and when properly carried out, and for a sufficient length of time, it is usually completely suc-

cessful." Let me say that the words "when properly carried out" and "for a sufficient length of time" show just wherein the medical man fails in his management of cases of gastric ulcer.

We are now brought face to face with the first problem in the therapeusis of gastric ulcer, namely, its medical management, and it is right here that the most serious if not actually fatal errors are committed. Given a diagnosis of gastric ulcer, the patient should at once be placed under proper management, just as he would were typhoid fever suspected. The time wasted in not instituting proper measures ofttimes means the difference between success and failure.

The sole indication other than the administration of medicines in the treatment of gastric ulcer is local and general rest. To the accomplishment of this end, attention to numerous details is absolutely necessary. As subordinate portions of the treatment, nutrition of the patient must be maintained, suffering must be relieved, and the complications must be combated. It is to be assumed that this treatment in order to be successful must have been adopted early in the course of the case, and before such complications have taken place, for it is hardly possible that said complications can ever be amenable to anything short of surgical measures.

The rest must be absolute, and must be continued for a period of never less than three weeks, and it will be better if a longer period can be enforced. Patients will object to this, as it takes them away from their usual occupations, and resent it as unnecessarily severe, arguing that they are able to go about with comparative comfort. No compromise should be allowed on this point. Under no circumstances would I consent to the patient getting out of bed under three weeks, and it will be better yet if the time of getting up is postponed until three weeks after the subsidence of all symptoms. In view of the seriousness of the disease, the liability to relapse, and the prospect of thereby going through the treatment once more, it is well to make the result as certain as human affairs can be made, by insisting upon the full period. The greatest attention should be paid to detail in enforcing this rest. The patient must not be permitted to rise for either stool or urination. He must not be permitted to see company, for his friends will surely lead him to talk and laugh. These acts involve more or less movement of the diaphragm, which in turn is imparted to the stomach. *Rest* in the treatment of ulcer of the stomach means REST. Carried out as it should be, it is irksome, but it is beneficial.

The stomach must be relieved of all work. To this end, no food should be given by the mouth, and rectal alimentation must be substituted. For this purpose, there should be administered in the rectum

three times daily a mixture consisting of eight ounces of milk, one egg and a saltspoonful of salt. Attention should, of course, be given to all the technical details involved in rectal feeding. At the end of five days, or—if the patient can go without food that long—seven days, feeding by the mouth may be commenced. At first but an ounce of milk may be administered every hour, and this for the first day. The next day two ounces may be given every two hours; on the third day, three ounces every three hours, and so on until the patient is taking eight ounces of milk three times daily. Of course this quantity of food is not nourishing the patient satisfactorily; it is not expected that it should. So it may prove to be a wise plan to supplement it by continuing the rectal feeding twice daily.

At the end of the second week of the treatment the patient may be permitted broths and bouillon in addition to the milk, and the intervals of feeding may be considerably reduced. Finally, finely divided meats, raw oysters, sweetbreads, well-cooked rice, spinach and mashed potatoes may be permitted, in small quantities at first, gradually increasing the amount in accordance with observations made as to their effects and the condition of the stomach. It is of the greatest importance that the foods prescribed be given at a lukewarm temperature, as excessive heat and cold are deleterious.

Some authorities recommend the administration of milk by the mouth in conjunction with general rest in bed, from the first. In cases in which rectal alimentation is not tolerated—though I have never met with any such, a compromise may be permitted on this point. *But the physician should not compromise until he finds himself beaten.*

There can be no question that gastric ulcer is dependent in part upon hyperchlorhydria. Neutralization of this condition has been considered by some as part of the treatment. Fortunately, the absolute rest given the stomach by the rigid treatment lessens the gastric secretion; hence the hyperchlorhydria seldom requires special treatment. Should special measures be demanded in any case, though I have never seen such, one may resort to material doses of bicarbonate of soda or calcined magnesia. Mathieu teaches that the chemical correction of the hyperacidity constitutes an efficient treatment of itself, and to this end recommends the administration of alkalies in all cases. It seems to me, however, that such treatment is unwise, for while it tends to relieve subjective symptoms it cannot be as efficient as the rest-treatment, and must by reason of the relief experienced permit, in some cases at least, the ulceration to progress to a dangerous extent.

The argument that many cases of gastric ulcer heal spontaneously should not weigh against the adoption of the stringent measures I

have advised, for we have had such arguments presented in the case of appendicitis, 80 per cent of which, it is admitted by the surgeons, will never require operation. But, as in the case of appendicitis, one can never tell which cases will result disastrously, and so we must cure the ulcer.

Now it is my belief that nearly all cases of gastric ulcer will yield to the treatment above outlined.

Failure to restore to health must occur in some cases. Unfortunate results are to be attributed to the progress of the lesion before the institution of proper treatment or to the existence of complications. Practically all of the latter require surgical intervention.

If the medical treatment of gastric ulcer is not an unquestionable success at the end of eight weeks, then, I say, it is time the surgeon is consulted. Again, no delay is to be countenanced. The prolonged rest has undoubtedly brought about healing to a certain extent, and the surgeon's measures are more likely to prove successful than if the case is permitted to go on for an indefinite period. It seems like folly to advise further temporizing, for an ulceration that will not heal under such treatment must be a serious matter.

As to the surgical measures to be adopted in the treatment of gastric ulcer, much depends upon the nature of the case, as determined after the abdomen has been opened. The clinical observations of Robson and Moynihan seem to demonstrate that gastro-enterostomy by reason of its ability to drain the stomach, gives rest to the organ, and thereby promotes healing of the ulcer. The fatality of the operation is low. Posterior gastro-enterostomy, which is the only one permissible, has yielded but two deaths in forty operations by Robson. Anterior gastro-enterostomy has a larger mortality, and moreover, when performed for the relief or cure of benign disease of the stomach is extremely liable to be followed by jejunal ulceration, as shown by Mikulicz and others. Excision of the ulcer seems to be losing ground as a procedure by preference. It adds to the danger of the case, and can be obviated by safer measures. The argument that excision does away with a bad scar and thereby lessens the possibility of subequent carcinoma does not seem to be worth much, for careful clinico-pathological studies conducted by Osler and Macrae show that carcinoma of the stomach is very seldom engrafted upon the cicatrix of an old ulcer.

Time will be required before the exact sphere of gastro-enterostomy and its ultimate results can be determined. Thus far, experience demonstrates that the peristaltic power of the stomach is much improved, that hyperacidity when present is reduced, that the dilated stomach gradually returns to its normal size, and that a sphincter develops at the new opening, the power of which increases with use.

Much has been made of the influence of adhesions of the stomach to adjacent organs as à cause of ill-health. Personally, I have very serious doubts if this complication of ulcer is often encountered clinically. Nevertheless, it is a conceivable lesion, and one would suppose *a priori,* that it should be common. At any rate, an exploratory laparotomy should discover their presence, when they can be treated.

Surgical intervention in gastric hemorrhage is not to be advised unless the case is one of extreme urgency or obstinacy. About 95 per cent of the cases of haematemesis yield nicely to medicinal and hygienic measures, and that, too, generally within 24 to 36 hours. The cases which should be reserved for operation are those in which the bleeding shows no sign of abating at the end of this time, cases in which two or more attacks of hemorrhage hae occurred, and where the loss of blood is great and the preceding history of ulceration unquestionable. Too much time must not be lost in deciding for operation in doubtful cases, for observation has shown that in the majority of fatal cases, the unfortunate result has taken place within 24 to 36 hours.

So far as perforation of the stomach is concerned, this accident is almost inevitably fatal left untreated, and no time should be lost before operation is performed. Surgery reduces the mortality to one-half. The shortness of time elapsing after perforation has much to do with the success of the treatment.

Dilation of the stomach may be treated by gastro-enterostomy. Hitherto, it is a common practice to advise daily lavage, which of course, is not a curative measure. While the patient experiences considerable relief, nevertheless, his illness gradually progresses to a fatal issue.

While there is much to be hoped for in the surgical treatment of gastric disorders, the maximum of good results cannot be attained until physicians pay attention to diagnostic accuracy, and develop a high degree of examination technique. The surgeon is supposed to be a surgeon, and cannot be expected to be omniscient. He does not claim to be. The frequency with which he is brought in contact with cases that had for months passed the realm of medicine and entered that of surgery is certainly exasperating to him.

The physician should in his treatment of gastric disorders pay strict attention to every little detail, otherwise he loses the opportunity of scoring a success for medicine, and he makes an operation necessary.

Physician and surgeon must not be carried away by the results of surgical masters, and operate indiscriminately on life-long dyspeptics. The assertion that the majority of such are suffering from the effects of ulcer is in the highest degree ridiculous. The predominant dyspepsia is neurotic in origin. This is proven beyond dispute by the clinical

courses pursued by the cases. If improvement follows operation in such instances, it proves nothing excepting the value of suggestion and rest in the treatment of gastric disorders.

DISCUSSION

GAIUS J. JONES M. D.: In our town, where operations have become somewhat epidemic, by observing the results of these cases I have learned to discredit in some cases the statistics that come from the surgeons. I have had occasion to treat a good many cases of this kind, some of which had been condemned to operation before I saw them; and I find they can be treated more successfully by medicine and the treatment which should accompany it, than by operative interference, except in a very few cases.

The rest-treatment which is recommended I approve, but the time given is not long enough. You cannot secure much improvement in an ulcer in four, or five, or six days. In one case reported food was allowed to be given by the stomach at the end of that time. I should say at least three weeks should be occupied in treatment before any food should be given by the stomach; and then I do not allow the giving of milk in any cases. I consider that milk is solid food; it becomes solid before it enters the intestine from the stomach; and if I give anything it would be some farinaceous gruel which would not assume the solid form and disturb the intestine as it passes.

I feed the patients per rectum every six hours; and flush the bowel out thoroughly once in forty-eight hours, waiting two hours after the flushing before another feeding. This rectal feeding, which has become quite common, the method for which I have taught for many years, is practiced by our alumni generally. It is a much more simple matter than people ordinarily suppose. Years ago it was claimed to be, or thought to be something to be used only in dire extremity. It can be kept up for a much longer time than is generally supposed. I have fed patients by that method for three months, giving very little by the stomach during this time.

In reference to the food which should be administered when the time comes, I want to say that after liquid had been used for some time I have restored the strength and supported the patient best by giving beef-steak, to be chewed and the fiber expelled, swallowing only the juice. I have allowed that to be given sometimes for two or three months. And with that a very common article that I give is a pudding made of corn starch, which is exceedingly smooth and disturbs but little. With the corn starch pudding I give that which has not the objectionable qualities that milk has, or cream. I had a patient suf-

fering from this disease who took beef in that manner, probably the juice of one and one-half pounds daily with one-half pint of cream; and on that she not only held her own, but gained flesh. There has been a much greater mortality in our town from surgical operations of this kind than reported or indicated in this paper; and if you will watch the cases in your vicinity I think you will find this to be the case generally.

G. F. MARTIN, M. D.: I want to express my pleasure at listening to this paper of Dr. Bartlett's. In the main it cannot help being useful and helpful to all of us. There are two or three points on the paper to which I wish to refer briefly.

He gave it as his opinion that not over five per cent of cases of this kind should be fatal under proper medicinal treatment. I regret, and I think many of us must regret, that he did not give more fully what he considers proper medicinal treatment for these cases. A statement of what Dr. Bartlett considers proper medicinal treatment, from a man of his experience, would certainly have been very useful to us.

The second point that occurs to me, in thinking over his paper, is his reference to rectal feeding, which I use extensively not only in this class of cases, but many other cases where the stomach needs rest, particularly in surgical work. My experience with rectal feeding has not been as uniformly successful as Dr. Bartlett's. I regret to say that I have found more cases in which it is not tolerated than has been his experience; but where such cases have been found, benefit has usually come from reducing the size of the injection. I think it is the experience of many hospital surgeons that a rectal feeding composed of not over four or five ounces will be tolerated many times where eight ounces would excite irritation and a rejection of the nutrition—something which we dread to see.

In regard to keeping the friends of the patient away, I most heartily say "Amen" to that suggestion; but I think there is one stronger reason for this advice than those given by the essayist. Undoubtedly the laughing and rapid respiration which would follow excitement would increase the motion of the stomach. But from a careful study of many charts in operative cases in the hospital, I can say without hesitation that visits of friends to patients after critical operations, or in critical conditions, have been almost invariably observed to be followed by a rise of temperature and an increase in pulse rate. Increase in temperature and pulse rate naturally means more blood pumped to every part of the body, and that is just what we do not want where a raw, bleeding surface is exposed. I think more harm would follow from the

fever and increased circulation excited, than would be apt to come from increased motion of the diaphragm and the stomach.

G. J. JONES, M. D.: In feeding per rectum, I usually give from four to six ounces; rarely more than that at one time.

R. C. ALLEN, M. D.: Four months ago, a gentleman called upon me for treatment. His condition was diagnosed as cancer of the stomach by some, and as a gastric ulcer by others. He came to dwell in my neighborhood, and expected to die. He had never taken Homœopathic medicine. He gave me the symptoms which would correspond closely to cancer, or ulcer of the stomach: He had intense burning in the pit of the stomach, which diffused itself over the abdomen; the abdomen was tender to pressure; soreness of the abdomen; dryness of the throat, burning in the throat, which was aggravated by drinking water; the condition of his stomach was aggravated by water or food. Anything that he put into his stomach brought on additional pain. His pains were continuous. He had fallen away in flesh and was very much emaciated. The whites of his eyes were slightly yellow. The skin was white, and he had constant pain; his bowels were moved every day by assistance—sometimes slightly loose and sometimes constipated. I gave him arsenicum, in the twelfth decimal trituration, and I gave him two powders of that daily, one in the morning and one in the evening; and I directed that each day he use a quart of normal saline solution as an injection into the bowels; and that his diet should consist entirely of liquid food. The result was his pains disappeared, and he has gained in flesh; and just before I came to this Institute meeting he desired my permission to return to the city, to go to his business. He has gained flesh, he has no pain, and he wants some solid food, which was allowed. Now that is the medicinal treatment. The question arises: When shall this medicinal treatment cease, and the surgical treatment begin? It was a case that was diagnosed as ulcer of the stomach and cancer of the stomach. The treatment of this case was arsenicum; and these are the facts I am giving you, and that is the result of my treatment. He is getting well.

CARL CRISAND, M. D.: In September, '97, I had a man about 54 years of age under my care, who was suffering with a chronic stomach trouble, which had been variously diagnosed. One night I was called to his bedside in great haste; he had had a tremendous hemorrhage. He suddenly rolled over in the bed, became deathly pale, and from his mouth gushed a stream of blood as large as the size of his mouth. I never saw such a hemorrhage in my life from any outlet of the body. He seemed to collapse and became pulseless. I resorted to heart-stimu-

lants, applied hot applications to the stomach and he revived. Then I gave him a teaspoonful of vinegar in one-third cup of hot water. It acted not only as an astringent, but also as a stimulant. For about two weeks I had him use the stomach-tube to wash out the stomach with a solution of six Seiler's tablets to one quart of warm water, before taking any food. I resorted to rectal alimentation for several days and then, there being no more hemorrhage from the stomach, he was put on a light diet. I continued the use of the vinegar, about one-third of a teaspoonful in a half glass of water, gave him a teaspoonful every hour for a number of days and I believe it saved the man's life.

Just previous to having this case I read an excellent article in the Hahnemannian Monthly, on the use of Acetic acid, and that led me to the use of vinegar; it was the nearest to Acetic acid that I could find at the time.

A most singular condition developed during the convalescence of this case. About a month after the hemorrhage, when he was gaining strength from day to day, he fell into deep sleep from which it was very difficult to arouse him; it lasted about ten days. The functions of the various organs of the body were apparently normally performed. The sleep was not uremic, because there was no suppression of urine. Although he never had even the slightest sign of another hemorrhage, he suffered much from gastralgia and hyperacidity of the stomach until he died, nearly two years later. Lavage with Seiler's tablets always gave him great comfort. He died in an attack of gall-stone colic. The family objected to an autopsy.

CLARENCE BARTLETT, M. D.: I agree with Dr. Jones in the necessity for the continuance of rest-treatment for as long a period as one can possibly go; but I have always found that with one week's absence of food by the mouth and rectal alimentation, by that time the rectal tolerance is injured. At least, that has been my experience with the particular nutriment that I have ordered. This plan of feeding is the one I learned from Einhorn some twelve years ago, and has been followed by me almost invariably where rectal alimentation is required. I have never as yet had a case where I could not enforce the rectal feeding up to the end of the first week; but then, all of my cases have been treated under circumstances where one could enforce discipline; that is, in the hospital, either in private wards or in private rooms; and that, of course, is a very different matter from attempting to follow the same plans in the midst of the family, with every one pitying the patient and at times doing what they can to disorganize the best efforts on the part of the physician. The effect of rectal alimentation in these cases is shown very early, because almost at once pain is relieved, so

that at the end of two or three days the patient is so comfortable that he or she sees very little reason for remaining in bed, especially for the long time that you propose such patient shall remain. Of course if I could induce the patient to go the three weeks that Dr. Jones recommends I most assuredly would be glad to have that because I feel that the patient sinks or swims on this treatment; that is, he will recover if the case is curable by hygienic and medicinal measures, under such a course of treatment; and if it is not curable, why you might as well give it up.

Dr. Martin refers to my failure to mention medicinal treatment. Now, I call proper medicinal treatment the proper hygienic measures in association with the administration of whatever medicines may happen to be deemed advisable. Of course in the treatment of gastric ulcer one has no symptoms whatever of an objectionable character. Necessarily he is limited in his selection of medicines to absolutely subjective symptoms, as they require prompt action, and these must vary in gastric cases notably. Symptoms will vary with individual temperaments and surroundings.

The medicines which I have used more than any others have been Nitrate-of-silver, Atropia, Belladonna, Bismuth; and in cases having a syphilitic infection, Iodide-of-potassium and mercury. Now, while I do make a practice of administering the medicines in these cases in conjunction with the hygienic measures which I advised in my paper, I would place very little dependence upon medicines alone in obtaining a successful result. Of course I know that some cases do improve, and many cases get well on medicinal measures alone; but I look upon the result as too uncertain, or possibly I had better say as less certain than when medicinal and hygienic measures are combined.

Dr. Jones refers to the cases treated and to statistics, and he has not much faith in statistics, and I may say that I have not either, as statistics are used. The worst of it is, we have some wonderful statistics given by individual men. For example, there has recently appeared a man from the West, reporting statistics of such marvelous character that I almost felt we had before us a duplicate of the Biblical character; but others have gone there and report that this man is a wonder. For example, he operates in gastric cancer, seventeen per cent mortality; and yet I would feel that if he operated in gastric cancer with seventy-five per cent mortality after the operation he would be doing good work; and his other results are equally astonishing. And it is assured me by those who have seen him that his statistics are correct. But he is *one* man. Now, the danger of such men lies here: Any man who has any surgical aspirations—and it is remarkable how

many do have—these men who have never done one operation of the kind expect to get the same results as men who have done the operation by the hundred, as Mayo in Minnesota; Munyon does in Leeds, I believe it is; that Robson, his associate, does.

It would seem now, of course, results that are not expected are reported. A case of cancer is stated to have been diagnosed, and it became well; or a case of ulcer is reported and it became well. We all know the uncertain clinical tempers of nervous stomachs. Unfortunately our diagnostic methods as yet are by no means certain. I do not care how much a man may flatter himself on his diagnostic ability while he may feel that he is right, he probably is right in the vast majority of cases; nevertheless, if he is a man who never makes a mistake, he is pretty sure to be a man also who does not have any difficult cases to manage. So I feel that the statement that so-and-so, a specialist, makes a diagnosis, never proves that that specialist is absolutely right; or that the person who does better than that specialist is always correct in his deductions.

Acetic acid as a remedy for hemorrhages is an old one and was highly recommended in the form of vinegar by the late Dr. Farrington, who was the professor of materia medica at Hahnemann, Philadelphia, in my student days; and he, as you all know, was the greatest teacher of materia medica our school ever knew.

THE INFLUENCE AND LIMITATIONS OF CERTAIN CLIMATIC ELEVATIONS UPON PULMONARY TUBERCULOSIS

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As a resident of a portion of the country much frequented by victims of this malady, it is perhaps fitting that I should offer this subject for your consideration. While I have nothing new or startling to present, a brief review of conditions as we have found them to exist, may be of benefit to those of you who contemplate advising a radical change for tubercular patients.

Many able clinicians today do not believe it has been successfully proven that the tubercle bacillus is the only cause of phthisis, altho' we all admit that its presence is a valuable aid in diagnosis, and should always be sought. But it is well known that in the early history of some of these cases, frequent and careful examinations of the sputum yield negative results. Thus it is evident that the individual factors, such as family history, corpulence, and chest measurements are necessary in the early consideration of each case. Applebaum's observations, published in the Berlin Kleiner Wochenschrift, 1901, Vol. XXXIX, together with others, show that the earlier stages of phthisis have a well marked anaemia, the red blood corpuscles averaging about 3,800,000, haemoglobin 69 per cent, leucocytes about 6,500, and a specific gravity of 1049. Blood examinations will therefore be of considerable value in the early diagnosis.

The great mortality from tuberculosis, makes justifiable any measure that will either curb its progress or make possible its eradication. Of all measures yet proposed, perhaps none has met with more uniform approval and been given better clinical verification, than the open air method. Especially is this true when a change of environment and elevation is made. But we all recognize that there are limitations to this "out of door treatment," and the sooner we determine the relation of the pathology of the disease to these limitations, the better will be our judgment in the assignment of tuberculous cases to the various health resorts.

Prompt action upon the part of the patient to seek medical advice, and a keen observation on the part of the physician to early detect the tendency to a downward course, are the first essential factors to its successful eradication. A diagnosis once made, the general custom

is, justly, to send the patient to more elevated districts; some but a few miles from home, others to the foot hills. and still others to the distant mountain regions at elevations of from four to ten thousand feet.

We are all aware that any given elevation does not affect all cases alike, the same elevation differing quite considerably in its physiologic action, depending on the humidity, sunshine, and the various aromas. These factors constitute the climatic conditions which are so influential in this particular disease, and which, fortunately, are so widely varied and so accessible in this country.

Thus it will be seen how a certain locality might be peculiarly adapted to some one particular type, and that a case which would progress favorably, and possibly to ultimate recovery, at one elevation and degree of moisture, would rapidly fail in another. Therefore to be most successful, requires first an early and thorough knowledge of the character of the lesion and the individual factors which influence it, and then some data concerning the different localities which are beneficial in these cases.

For the past forty years Colorado has been one of the most popular of the climatic havens for those afflicted with the "White Plague," and has during this period, given abundant clinical evidence of its influence upon certain well defined types or stages of this disease.

There is a fair proportion of the tubercular cases either benefited or cured by emigration to the west, and especially is this true with cases in their earlier stages. By this I mean at a period so early that there may be little or no cough or expectoration, and consequently negative results in the microscopical examination of the sputum. Physical examination may be negative, or show slight apical dullness and broncho vesicular breathing. These cases usually present a reduction of corpulence below twenty-four, and a vital capacity below a safe average, altho' it does not necessarily follow. Such cases generally do well with almost any change in locality and environment, elevation not being absolutely necessary to their recovery. Improvement is usually rapid, and in the course of a year or more they will have recovered sufficiently to return home for at least a short time. But such an attack does not establish immunity, and these cases are not safe from a recurrence of the disease until after some ten years have elapsed. Frequent reference to the general physical condition, and examinations by the family physician for any returning symptoms, should, if any are found, be the signal for an immediate return to the old haunts.

Often, however, with proper conditions of life prevailing, such as hygiene, diet and exercise, these cases reach the average expectancy in their own homes in excellent and even vigorous health.

There is a type of pulmonary tuberculosis which is best described as catarrhal. Early in its history it presents few constitutional symptoms, and but little vesicular involvement or consolidation, but has a constant hacking cough attended at times with profuse expectoration of mucus. Microscopical examinations of the sputum may, and usually do give positive results for the bacillus tuberculosis, and the pyogenic organisms are generally present in small numbers. This type is probably the one which has given Colorado its reputation as a health resort; for with the average low percentage of humidity, the involuntary increase in chest expansion with each respiration, and the great number of hours of actual sunshine, associated with aromas from large forests of pine, spruce and other coniferous trees, it has indeed a combination of conditions most favorable to an arrest and recovery of this particular type of the disease.

The pneumonic type which develops unexpectedly in cases that have hitherto enjoyed perfect health, with excellent family history, reacts very favorably to the climatic conditions prevailing about Colorado. It is characterized by the rapidity of the pulmonary destruction attended with early and extensive consolidation, temperature and night sweats. While rapid recovery is not the rule so far as clearing up the pulmonary consolidation, as this often remains for a year or more, the temperature, night sweats, cough and prostration are early relieved. Especially is this true at elevations of from three to five thousand feet Patients in this condition may be so weak and prostrated as to be brought to Colorado on stretchers, but within two or three months the temperature will become normal, and there will be an absence of most of the objective symptoms. This is particularly true with those patients who are willing to live out of doors, and endure the changes of temperature and moisture incident to such a life, and it is surprising the amount of lung tissue that may be reclaimed unless fibrous degeneration supervenes.

Should pyogenic infection occur, however, in the consolidated area, the prognosis is very materially altered. For gangrene once established, there is but little more hope for recovery in Colorado than other localities, unless it is of recent origin, and occurs during the summer months when our percentage of humidity is very low. In that case it is possible by the selection of a favorable locality among the mountain parks or valleys, and an out of door life, to arrest further progress of the gangrene. But this is in the earliest stage of this type and especially during the summer months when the degree of moisture in the lung, the time of the year and the locality all play an important part in the chances for recovery.

Should it have progressed to the second stage the patient is almost sure to lose ground, no matter what the environments. Climate and elevation offer nothing more than a temporary stay to its progress. It is of considerable advantage to the individual, however, when fibrous degeneration of the pulmonary connective tissue occurs to a moderate degree, for it temporarily arrests further invasion of the parenchyma, and often, especially during the most favorable season, the moisture will disappear, and the result will be an effectual arrest of further progress of the disease. Again there will be several successive aggravations of the disease, each attack being aborted by this limiting degenerate connective tissue, but the patient even then will often yield to the inroads of the pyogenic organism.

The chronic and advanced fibroid cases, where the parenchyma is largely displaced by connective tissue, do not do well in the higher elevations, owing to the necessary increase in chest expansion, and the usual association of cardiac hypertrophy and valvular embarrassment.

Through the kindness of our local forecast official, Mr. F. H. Brandenburg, I have secured data regarding precipitation, humidity, temperature, and sunshine, for the past thirty years, from which I find that from September to February inclusive, Colorado has an average monthly precipitation of 0.66 of an inch, and an average humidity of 50 per cent. The temperature during this period has averaged forty-one degrees, and the percentage of possible hours of sunshine has been 75. During this same period, with this relatively low precipitation, and the higher percentage of humidity, the average number of deaths from tuberculosis, by the month, for the past three years, has been one hundred and nine.

During the period from March to August, or the summer months, while statistics show a monthly average rainfall for the past thirty years of 1.67 inches, humidity 48.8 per cent, an average temperature of 58.5 degrees, and the decrease of possible hours of sunshine to 65 2-3 per cent. The death average per month for the past three years is ninety-nine, or ten less per month than during the winter months.

The mean daily change of temperature in Colorado will average between five and seven degrees, being (as is the case elsewhere) greater during the winter months. Estimates for the past ten years, for Colorado, indicate that the mean daily average from September to March, inclusive, is 6.1 degrees, while from April to September, it is 4.7 degrees.

Clinical experience has taught us, that the gangrenous type of tubercular patients often do better in New Mexico and Arizona during the period from September to March, and where the patient can afford

it, it is the frequent custom among practitioners of Colorado to send them to these localities for the winter months.

The increased mortality at this period can hardly be attributed to precipitated moisture or low temperature, for there is less of the former and the mean average of the latter for the past thirty years, has been but forty-one degrees. Of course there are periods during the winter months when the temperature falls below zero, and may remain for a week or more, but this is the exception rather than the rule. As the hours of actual sunshine are even greater, it would seem that humidity, and mean daily change alone, bear the close relation to the increased mortality of the winter months.

Cases of pulmonary hemorrhage following Bronchitis, and repeated colds, or La Grippe, where there is probably no cavity, but consolidation of an apex extending down to the third or fourth rib, usually improve rapidly in Colorado at elevations of from five to eight thousand feet, and this altitude may be attained without delay. Paradoxical as it would seem, the elevation appears to have a specific action upon these cases in relieving the hemorrhagic tendency. Aphonis is sometimes present, and often remains for a year or more, altho' the patient may resume his regular vocation within a few months after arrival in Colorado.

On the other hand, hemorrhagic cases with cavity should reach the elevations gradually. Not infrequently we have in Denver, fatal cases of hemorrhage, which, owing to the size of the cavity, have been incautiously assigned to an elevation, to which no hemorrhagic case with cavity of considerable size should first be sent.

In conclusion, while not wishing to depart from my subject, a brief reference to the early detection and treatment of tuberculosis, not climatic, may here be made. I believe that evidence of future tuberculosis can be found even in childhood, and that the time to successfully cure this disease is not when clinical evidence establishes its presence in the adult, but during the earlier years of child life should the work of eradication be commenced.

Children with the inherited tendency, or a predisposition independent of family history, will have the tubercular chest, best described as irregular in conformation. Often a flatness is marked, or sufficient deformity of the bones occurs to embarrass good and full respiration. Again there may be a habit of restricted breathing with consequent impoverishment of the blood, which of itself is sufficient to cause a predisposition. And I am fully convinced that the most satisfactory results in the treatment of this disease (the late serums, nostrums and methods notwithstanding) will come from an active and persistent can-

vass of the schoolroom for such cases, by competent and acute physicians, who will, upon their detection, assign them to gymnasiums, or outdoor life for careful and systematic training; for in these cases, especially, would the physical training be considered of equal or more importance than the mental.

Finally, it would be interesting to know of all the tubercular patients of the various types assigned to the Rocky Mountain region just what per cent of them recover. I know of no means, however, at present, to secure such information. At some future time I propose to secure these data if possible, and especially with relation to the varied types of the disease.

DISCUSSION

J. HENRY HALLOCK, M. D.: Dr. Tennant's advice on the care and treatment of children should give food for thought to all, and especially to those practicing in large cities, where they necessarily come in contact with children who lack the benefit of sanitary surroundings.

The Adirondack Mountains are not as large nor as high as the Rockies, and Saranac Lake is but a small part of the Adirondacks, and yet within ten miles of this place the old school has already four sanitariums, and two more large ones are building. Of course, there is a reason for this great outlay of money, namely, a large percentage of cures.

If there is a choice in the class of cases, the fibroid and chronic cases, which doctor says do poorly in Colorado, do especially well here; but a majority of all early cases do well here. The trouble comes in sending them so late they need a new set of lungs, and Colorado nor the Adirondacks cannot supply these.

I spent a part of last winter in Colorado, and there is no place in the United States with a better air or finer climate, but after an experience with hundreds of cases, coming from every state in the Union, I am of the opinion that only in exceptional cases is there anything to gain in a great elevation, and with the majority of patients the height of the elevation should bear a relation to the amount of lung tissue capable of being used. My experience has led me to believe that in lung patients with less than three inches expansion and a highly neurotic development that very high altitudes are contra-indicated.

In regard to our not being able to find bacilli in all subjects, I anticipate part of the failures are due to our lack of perseverance. Even where the lungs are involved and the patient is properly instructed to save only the deeper portions of his expectorated matter, it may then become necessary to examine four of five specimens,

THE INFLUENCE OF THE CLIMATE OF SOUTHWESTERN TEXAS UPON RESPIRATORY DISEASES

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In this paper I propose to tell the truth, the whole truth, and nothing but the truth. There has been a vast deal of fancy writing about climates; some for advertising purposes and some from ignorance or unbalanced enthusiasm. Be that as it may, the importance of climate in the successful treatment of tuberculosis, especially, is rated much lower by the profession to-day than it was ten years ago. Two factors undoubtedly account for this change of view. First: the vast number of patients who have left home for distant climates only to come back for burial or to die has convinced us that climates do not by any means bring about the infallible cures they were supposed to. Second: the remarkable results achieved in the sanatoria, amid indifferent climates both in Germany and in this country, have demonstrated the fact that the influence of climate had been greatly overestimated.

In consequence of this change of opinion many doctors are now advising their patients to go to sanatoria near home or to live a sanitarium life, so to speak, right at home. Proper and abundant food, life in constant fresh air, perfect regularity in all habits of life, perfect hygiene—these have been found to be far more important factors in cure than change of climate. There is no question but that thousands of hopelessly incurable victims have been allowed, or encouraged, to leave home, only to die among strangers, in loneliness and sorrow. The mortality records of San Antonio, Texas, show that 60 per cent of all deaths from tuberculosis occur within the first year of their residence there. This shows the advanced stage in which many of these cases leave home. Then, forsooth, the "climate is no good!"

But, after all, let us be just. If such splendid results can be attained by proper methods in notoriously poor climates, it stands to reason that much better results can by the same methods be obtained in a good climate.

Among good climates that of southwest Texas holds a deservedly high place. It is a *sui generis*—has qualities peculiar to itself which must be understood in order to appreciate what influence it may reasonably be expected to exert upon respiratory diseases. Starting from sea level at the gulf coast, the country slopes to the northwest, with a gradual rise, until in the region about San Antonio, 150 miles

from the gulf, we are in the foothills of the Guadaloupe mountains, at at altitude of 700 feet. Within thirty miles to the northwest we reach 1,200 feet, and in 100 miles we can go 2,000 feet. Keeping on in this direction for 200 miles more we can go to the Brownwood and San Angelo country, at an elevation of 3,000 feet. Going more directly west, by the Southern Pacific Railroad, we gradually ascend until, at Marfa, Alpine, and Fort Davis, we attain an altitude of over 5,000 feet. Descending slowly again, we finally reach El Paso, 500 miles west of San Antonio, at an elevation of 3,500 feet. It can readily be seen that within this section of Texas, a good-sized state in itself, the health seeker can find any altitude from sea level to that of Colorado Springs or Denver.

The proximity of southwest Texas to the great Gulf of Mexico naturally influences atmospheric conditions perceptibly. Near the coast there is consequently more moisture in the atmosphere than farther west and northwest, where, owing both to distance from the sea and to the higher altitude, the atmosphere is much drier. In fact, the average humidity for the year in San Antonio is exactly that of Chicago. But the effect of this moisture is modified by two factors. In the summer the high temperature would naturally make such a humid atmosphere oppressive. In the summer mornings the humidity is often 80 per cent. The sky is cloudy and heavy. But by ten o'clock all the clouds have disappeared and old King Sol is getting in his work. Meanwhile the glorious, steady trade winds blow and blow from the gulf, and pretty soon the humidity goes down and down until by night it is only 25 or 30 per cent. Not only, therefore, does the breeze dry the atmosphere, but it also evaporates the body perspiration and thus keeps the blood cool. This accounts for the fact that sunstrokes in this country are comparatively rare, and such high temperatures (105 to 115 degrees) as are sometimes experienced in states farther north are never known in southwest Texas. Many summers the maximum temperature will never go over 100 degrees, and usually jogs along at about 97 to 99 degrees during July and August. But of course when that maximum is registered humidity is down to about 30 per cent; so you can see how easily it can be borne. And yet this very delightful breeze is a bugbear to some invalids; it makes them cough, it makes them mad. As the trade winds can't be calmed, such people must move out!

Now, in the winter the prevailing winds are from the north. As a rule, sweeping down over the prairie states north of us, they are very dry and drive the moisture from the gulf back into the sea. Consequently the proximity to gulf moisture does not affect us in even

the coldest "norther," as these winds are called, for it is a *dry* cold. But alas! sometimes the icy north sends us down a viciously wet, rainy norther, and then we can only seek shelter and say unpleasant things about the weather and apologize for Texas! Even the fairest rose must have its pricking thorn!

In the winter the geographical position of Texas causes a detraction from an ideal climate. Lying in the direct wake and in the tail end of the great blizzard states, it suffers, in common with all these states, from the sudden and violent changes of temperature. Within twenty-four hours the temperature may drop sixty degrees. Fortunately, as said before, when these changes are dry they are not so conducive to sickness as when they are wet. In this respect the equable temperature of southern California is certainly far more comfortable, to say the least. Yet, I believe that the Texas climate is much the more invigorating of the two. However, from June 1st to October 1st the climate is equable enough to suit anybody—equably *hot!* It isn't so awfully hot at any time, but it lasts and lasts; sometimes you can take in May and October, too, and make six months of summer! Now most invalids flee when this season comes. Well, many of them are so weak that the heat would be too debilitating, and, as they usually are incurable, anyway, with but short shrift, I encourage them to go home. But if a patient has a good chance for recovery I urge him to stay through the summer. This long, equable, dry, hot season enables him to live literally out of doors day and night, and then is the time to be cured. And the constant blowing of the gulf breeze really enables one to be quite comfortable—for Texas!

Thus one can draw the climate in large outlines, but when it comes to filling in the details there is room for infinite variety. No season one year is just like that of other years. Take a series of years and the averages of temperature, humidity, rainfall, wind velocity, etc., even up pretty well. But the health seeker never meets the *average;* it seems he is always striking exceptional weather and unusual seasons! One winter may be clear and bright and warm, with mercury dropping down below freezing only once or twice. Then the next year the northers may send the quicksilver tumbling down to as low as 6 degrees above zero, as I once saw it right here in San Antonio; a drop to 20 degrees may be quite common. It may be like the past winter—rain and drizzle so much that the visitors get tired and leave in disgust. Truly we feel sorry, but what can we do about it? Indeed it is only those who reside here permanently that can appreciate the superiority of the climate on the whole. Those visitors who happen to experience a reasonably favorable and average season and are not too hard to suit are abundant in their praises and come again.

Let me now inquire briefly what influence this climate exerts upon respiratory diseases. In the first place I am obliged to confess that in the area contiguous to San Antonio, with which I am most familiar, catarrhal conditions of the upper air passages are very common. Especially is this true of post-nasal catarrh and adenoid vegetations in the young. Tonsillar hypertrophies in consequence are also quite common, and the usual middle ear and mastoid complications I should judge about as frequent as elsewhere. Our ear, nose and throat specialists find considerable work among our own people. This prevalence of catarrhal conditions is due to the sudden changes of temperature of which I have spoken. Much of it, no doubt, is due to carelessness and could be avoided by reasonable caution; but people seem to think that because they live in a supposedly warm climate they cannot take cold. La grippe has usually favored this country annually in epidemic form. The past winter we have escaped. I am safe in saying that the disease is more readily managed and much fewer fatalities and serious sequelæ are met than in the rigorous north. Simple acute tonsillitis, laryngitis and bronchitis are all quite common, and for the same reason as the catarrhs. They are usually easily managed and speedily relieved. I am also sure that croupous pneumonia is much less common than in northern climates. I have gone through several years in succession without meeting a single case in my practice. In the winter and spring of 1902 I treated eight cases, which was a large number for me. In 1903 I have had only two cases. Catarrhal pneumonia is more common than the croupous form. I am of the opinion that the mortality rate in croupous pneumonia is about as high as elsewhere. There is a similar scarcity of the various forms of pleurisy. I rarely meet a case unless it is a complication of tubercular disease. Curiously enough, we frequently meet cases of large effusions and empyemas which were sent here from the north for consumption. Last year a young fellow from Ohio called on me, after being here five months for supposed consumption or vaguely "lung trouble"! He had had three good doctors at home. I withdrew three pints of serous effusion from the left cavity, the lung expanded moderately, and for a year now he has been back at home and at work in reasonably good health. There was absolutely no lung disease except simply the compression effects.

Coming finally to the consideration of tuberculosis of the respiratory organs—it is here that the climate of southwest Texas has won its greatest renown. Thousands of recovered tubercular patients are leading useful and busy lives all over this great section. To them this climate has been the elixir of life. And yet other tens of thou-

sands have here met only disappointment and the end of cherished hopes in untimely death. Almost invariably the latter class have come here too late for any possibility of recovery and frequently even of improvement. Many of them are so far advanced in the disease that they die within a day to a month after arriving here. Such people should of course never be allowed to leave home. And yet it is by no means uncommon to see here and there even such cases improve and finally make a practical recovery. It is the illustration of the old saying, "as long as there is life there is hope."

I do not think there is any special aseptic or ozonic or healing quality in the air, any more than in pure air anywhere. But pure it surely is, filling this great, unsettled, primitive country, for, as compared with its area, such is still southwest Texas. Pure are the salt breezes that blow from the great Gulf of Mexico—purifying all the inland atmosphere. Pure are the cold north winds as they sweep down all unclean gases into the sea. The great benefits of the climate are due to the fact that outdoor life is practically possible the whole year round. When people come here and hug hot stoves in filthy boarding-houses they are worse off than they would be at home. It is the outdoor life that cures, no doubt.

The climatic conditions are such as to embrace almost every type of tubercular patient. Those who are threatened by inheritance or who are in the incipient stage do well and get well because they can live an active, outdoor life. On account of the conditions as I have described them, the climate is not so enervating as in the other gulf states. Active outdoor life is possible in the summer. The change of seasons is decided enough to impart a virility and vigor which is impossible to a more equable climate like that of southern California. The winters are bracing and yet seldom so severe that a patient of this type cannot be outdoors every day. I believe such cases are usually supposed to do better in a mountain climate. The western section of our State affords the elevation necessary to that class, if desired, and yet devoid of the extremely severe cold and snow and storms incident to the mountains of New Mexico and Colorado.

The low altitude or coast section of South West Texas, extending about 200 miles inland, is particularly suited to cases farther advanced; those whose air space is too much diminished to make a high altitude possible, can breathe easily here. Hemorrhagic subjects run a minimum risk in this section for there is nothing to increase respiratory or heart action. Many patients who have hemorrhages at El Paso, 3,500 feet high, can live in San Antonio in security.

Patients having the mixed infection, suffering with high fevers

rapid heart action and debility cannot as a rule stand a mountain climate. They can do as well in the coast region of South West Texas as in Southern California or Florida. Another class—the *nervous* type —who cannot stand a high altitude, also do well here. The moderate moisture and the low altitude are alike sedative. Many such cases come down from Colorado and find relief here. Tubercular subjects of this irritable, high strung, nervous character do well at sea level itself. The delicate, anemic individuals who thrive in warmth and sunshine enjoy this climate and do well here. When the winters are severe or the wet northers prevail they would be better off in Southern California or in Southern Florida.

Without, then, decrying other climates, I believe I can truthfully say that almost any and every type of tubercular patient may be cured in this climate. I never saw a "quick" or "galloping consumption" even improve here; nor have I seen any recoveries from true laryngeal and pharyngeal tuberculosis. As I said about the details of a climate, so when you come to each separate individual, you can't predict! He can only try and see. It is like every other therapeutic agent; what helps one fails in a similar case. People ask, "is tuberculosis curable?" I say "certainly—emphatically, yes!" The tubercular victim asks me, "am *I* curable?" I have to say, "I don't know!" So you ask, "is the climate of South West Texas good for tuberculosis?" and I say, "certainly—emphatically, yes; thousands have recovered here." Then you say, "will it cure *me?* can *I* get well here?" and I have to say, "I don't know; may be so, may be not." I have never solved the mystery why one man gets well and another, with seemingly as good or even a better prospect, dies. It is the same thing in all curable diseases—typhoid pneumonia, scarlet fever, diphtheria, etc. If these diseases are curable, why don't *all* get well? Climate is good, food is good, hygiene is good, medicine is good, but in the last analysis the *personal equation* is most important of all. There is that in the one that wins and the lack in the other that loses. There is no "cure-all,"—only a "cure-some." But let the sufferer, like the brave Garfield, take the one chance in a hundred for recovery and fight for it and mayhap he will win. Who knows?

A BRIEF REFERENCE TO UNCINARIASIS (ANKLOSTOMIASIS)

C. E. TENNANT, M. D., AND G. T. ROOSEVELT, M. D.
DENVER, COLO.

This disease is also known as tunnel-miners or brickmakers anemia, Egyptian or tropical chlorosis, or hook-worm disease, and is a specific infection of the intestinal canal by the parasite Uncinaria Americanus (Stiles). It is characterized by gastro-intestinal irritation, anemia of a severe type, dizziness, dyspnoea, oedema and exhaustion.

NO. 1. UNCINARIA AMERICANUS (x20).
Showing Anterior two-thirds.

The recent investigations of Dr. C. Wardell Stiles, Chief of the U. S. Bureau of Animal Industry, Washington, D. C., has made it possible to differentiate this disease from the chronic malaria and other forms of anemia so common in the South. The recognition of a specific cause for this disease makes both diagnosis and treatment quite simple.

While the European type of this disease has been known since 1838 (Duibini), it has not been recognized as a disease common in America until after Dr. Stiles' recent investigation (1902). The Unciniara or hook-worm, a nematode parasite, belongs to the family strongylidae.

The name indicates, as will be seen in exhibit No. 1, the dorsal curvature of the body resembling a hook. The mouth differs from the ankylastomum in that it has a pair of semilunar plates in place of the four teeth. Below the conical shaped head will be seen the bulbous enlargement of the stomach from which leads the tortuous intestinal canal.

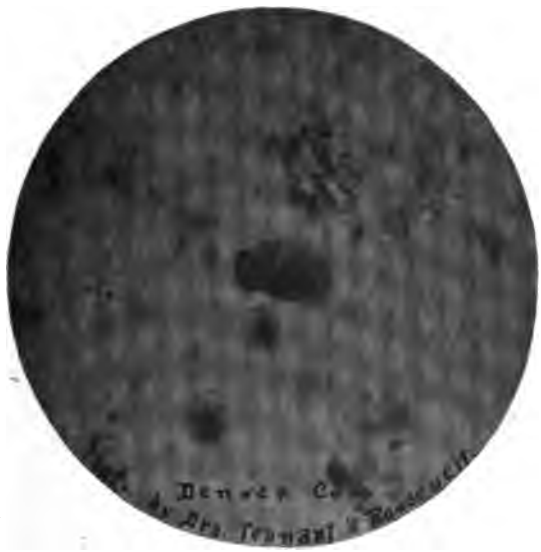
The male adult worm is usually about one-third, and the female about one-half inch in length. This parasite inhabits principally the duodenum and jejunum. It produces anemia by attaching itself to the mucous membrane and sucking the blood, and also by the escape of the blood from the ecchymotic spots after the worm has let go. The possi-

NO. 2. OVUM OF UNCINARIA (x216).

bility of toxic absorption is also worthy of consideration. The ovum, exhibits Nos. 2 and 3, does not develop in the intestinal canal, but is discharged in the feces and under favorable conditions of moisture, temperature (25 degrees C.), and culture media (feces preferably), segmentation of the granular mass within the capsule commences and in twenty-four hours embryos are found.

These embryos form by an agglutination of the granular mass after bursting the thick capsule, and the triangular formation as seen in the illustration exhibit No. 4, is the result, the head being the base. Within a few days a larva is formed, exhibit Nos. 5 and 6, which has a con-

tinuous gastro intestinal canal later developing a marked cavity at the anterior end, this cavity eventually forming the stomach. At this stage the larva is from two to three-tenths mm. in length, and about .03 mm. in breadth. As it develops it attains a size of six to eight-tenths mm. with an increase in the interior cavity. Oxygen is necessary to develop the larva from the ovum, but high temperature, absence of moisture or freezing destroy both. Infection does not occur from the ovum, but from the well developed larva which, after being swallowed, attaches itself to the intestinal mucous membrane of its host and sucking the blood for nourishment soon develops the adult worm.



NO. 3. OVUM OF UNCINARIA (X216).

While the uncinaria is visible to the naked eye it is best found in the feces by the low power lens. The ova are of course microscopic in size as are the largest larvae, and the infection of the individual is best determined by the presence of this ovum in the stool.

Those, who in the past year have been studying this subject in the South, believe that uncinariasis is a much more frequent etiological factor in anemia than is chronic malaria, and that it is exceedingly prevalent among the poor whites. Also that its existence for succeeding generations has produced the inferior physical development, lowered mental factors and proverbial laziness of this class.

Much credit is due to Dr. Stiles, who discovered the uncinaria, for he has made an extended investigation of this disease throughout the South, and his report in the bulletin, assured by the Department of Agriculture, describes the uncinaria very fully. The symptoms of uncinariasis are anemia, which may become pernicious. Eosinophilia and Oligocythemia are usually present. The complexion is waxy white or sallow, the lips or mucous membrane pale or colorless. Often cervical pulsations, water hammer pulse and hemic murmurs are present. The pulse varies from 80 to 130 per minute. There may be a slight temperature, possibly 100 degrees. The abdomen is distended, while from the

NO. 4. EMBRYO LARVA (X216).

general anemia the extremities are emaciated. The appetite is abnormal (pica), the uncinaria producing the depraved appetite (dirt eating), which in turn continues the infection. The disease appears to be more common and severe among the whites and blondes. Patients are improved during the winter months, owing to the fact that the ovum and embryo are destroyed by frost, thereby eliminating reinfection during this time.

But that this disease is not confined to the Southern states, is shown by the chronological summary of Capps, in which there are fifty-one cases reported, and out of this number there were some twenty cases

occurring in the Central and Northern states. The possibility of its more common prevalence throughout the States is greater with the acquisition of our new possessions, and the importation of labor during the late commercial expansion. While food and drinking water are common carriers of the contagion, hands covered with the larvae-bearing mud are probably the source of many infections. It is stated by one writer that the larvae may enter the body through the epidermis, while another claims that "ground itch" is the result of an invasion of the larvae under the skin.

For diagnosis the occupation is very important in tracing the source

NO. 5. LARVA OF UNCINARIA (x95).

of infection. Anemia, when not otherwise accounted for, should be suggestive. Typical cases of uncinariasis reveal a condition resembling pernicious anemia. Oligocythemia is pronounced, also a reduction of the hemoglobin. A rather constant symptom is the wide variation in size and character of the erythrocytes. Poikilocytosis being present, Eosinophilia is also a prominent symptom, although its absence does not preclude the possibility of the disease.

The most positive means of diagnosis is, of course, the examination of the feces. Ova found in the fresh specimen are characteristic; although they may be confused with other parasitic ova, knowledge of the

morphologic forms, cultivation of the larvae or the use of the anthelmintics in expelling the adult worm will soon decide the case. The presence of the Charcot-Leyden crystals are at least suggestive of intestinal parasites.

Treatment. This is simple if recognized early before degenerative

NO. 6. LARVA OF UNCINARIA (X60).

changes have occurred. After clearing the intestinal canal the night before, thymol in thirty-grain doses is administered at 8 and 10 A .M., followed by a saline. This is usually effective. Stiles has pointed out the danger of using alcohol with thymol, owing to its solvent properties.

DISEASES OF THE URINARY ORGANS—ESPECIALLY BRIGHT'S DISEASE—AND THEIR CURE

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Although the increasing millions of microbes and the glitter of the surgeon's knife have for the past decade almost blinded us, yet we have made some progress in curing disease by the internal administration of the homœopathically indicated remedy. At times the surgeon's knife is a wonderful help, and the little microbes serve as guide-boards, but when we go beyond that we must rely upon the carefully selected remedy to cure disease. As briefly as I can I will give a little of my experience in the cure of disease of the urinary organs; and will report one case to illustrate each disease mentioned.

A gentleman of near sixty came to me and said he had passed bloody urine for two years; he had been under the care of physicians of both schools who had disagreed as to diagnosis, as to whether it was disease of the kidneys or bladder; neither had given relief. I asked him when he passed blood. He said every time he had urinated for two years. I asked him *when* he passed blood; at the beginning of urination, or was it mixed with the urine, or at the end of urination? He said at the beginning every time. I diagnosed it as hemorrhage from the prostate gland, and gave him Saw Palmetto, the third decimal attenuation,—a dose once in two hours. In four days he returned and said there was less blood but some pain. He had never had any pain. I told him to take no more medicine and report in a few days. At the end of the week he returned and said he was well. He had no more trouble.

We claim the other school borrow our thunder and forget to render thanks; and we ought to reciprocate. We are told that that much advertised and lauded remedy Sanmetto is composed of Saw Palmetto, corn milk, and sandal-wood oil, and we can use those remedies singly with better results and more pleasing to the patient than the shot-gun combination.

I was called to see a lady sixty-five suffering from profuse bloody urination; apparently more blood than urine; with such excruciating pain she said she must die if not relieved soon. The pain was constant and so bad in her back that she was sure she had a serious kidney disease. Microscopic examination of urine showed severe inflammation of bladder, but no trouble with kidneys. I gave her

polytricum juniperum, mother tincture, four or five drops in one-half a glass of water, one teaspoonful once in two hours. In four days she was well, and said every time she took a dose she felt better than she did two hours before. This is a sovereign remedy for painful urination of old people, when the disease is confined to the bladder. Among the diseases of the kidneys is renal calculi; and renal colic is a disease no one craves the pleasure of treating. It is a howling disease, but I know no one who has made a howling success in treating it. During the passage of the calculi through the ureter, I think most of us have tested opium, morphine, chloroform, etc., with never-failing unsatisfactory results.

I was called to see a gentleman who had been suffering severely several hours with bilious colic, so said. He had been given Dioscorea tincture without relief. I diagnosed it as renal colic. I think these two diseases are sometimes mistaken one for the other. As chamomilla has excruciating pain, I gave him a dose of a high attenuation, and in a short time he was entirely relieved and later passed the gravel. You see I got there just in time to get the glory! Just the time I love to get there! But since then as well as before I have not failed to get relief from that disease with that remedy much quicker than with anodynes and anesthetics. Still there is something better, and that is a preventive; and I am happy to say that only once in forty-seven years have I failed to prevent a return and that was a mild case soon after a severe one. Some of the patients had had many attacks, for a number of years. The remedy that has been such a wonderful preventive is Apocynum and rosemifolium, Dog's Bane, Milk Weed, Bitter Root. I have given it in the third decimal attenuation a dose once in two hours for a week; then four doses a day for a week; then two doses a day for a week; then an occasional dose for a while.

The following case is reported more particularly to show why I gave a certain remedy in the following cases:

Soon after I made my proving of phaseolus nana which nearly stopped the action of my heart, and I think a few more doses would have been effectual, I was called in consultation with an old school doctor to a case of confinement—patient twenty-four; first child; badly bloated; urine scanty, and loaded with albumen, so the doctor said; had been in labor thirty-six hours with no sleep and but little progress. Soon after I entered the room she became blind, then dropped into a quiet sleep, but soon became frightfully convulsed and I proceeded to deliver, but with the second pain before the head began to press upon the perineum she had such a terrific convulsion

that despite my efforts to hold it in check, child and forceps landed in the bed with a badly ruptured perineum, which I repaired at once while she was unconscious. The doctor cared for the mother, I the child. Before we had the child washed and dressed the frightened doctor came to me and said the patient's heart was failing rapidly, and neither strychnia, amyl nitrite nor nitro glycerine would do any good. I had in my pocket a vial of phaseolus nana, ninth decimal attenuation, and we gave her a dose. In five minutes there was an improvement in the heart's action, and in ten minutes he was a happy doctor for the patient's pulse was beating quite satisfactorily. She had no more severe convulsions; in a little while consciousness returned; the albumen rapidly disappeared, and she made a fine recovery.

From this I was led to give it in a number of cases of albuminuria—one very bad one—and all recovered quickly. These cases decided me to give it in the two following cases:

I was called to see a gentleman aged forty-four, stout build, had been ailing several months, and for six weeks had been failing rapidly under old-school treatment. Urine scant, bloated from toes to top of his head; so badly he could not wear his pants; had to sleep on his knees, head resting on bed or chair; pulse twenty-eight. The two beats of his heart were so far apart it sounded like two hearts. Expert examination of urine gave albumen, 2 per cent; granular casts; pus; epithelium from kidneys; chronic nephritis with complete suppression of urine threatened. I considered it a hopeless case and should have sent him to our hospital only I didn't want to increase their death rate! I gave him phaseolus nana twenty-fifth decimal attenuation prepared by myself, a dose once in two hours. In forty-eight hours his pulse was sixty, but he had such a severe headache I was obliged to omit the medicine and gave sugar of milk. This remedy will give the wildest indescribable headache. In ten days he was out on the street, and two weeks from my first visit he took a trolley ride to another city and called on a friend. His surroundings were bad and his recovery slow, but he is able to work six and sometimes seven days in a week and his kidneys are all right.

I was called to see a lady aged twenty-five, married, no children; had been ailing several months; had had seven doctors before me; all old school, and yet she was alive, but barely so. One doctor had given her medicine, so they said, that took the plating off a silver-plated spoon. Her appetite was entirely gone; the mention of skimmed milk would produce nausea. She was able to sit up a little; urine scanty; badly bloated; head, body, and limbs, and pulseless at both wrists; heart beating rapidly but feebly. On boiling the urine,

it looked like the thickest sour milk; scarce a drop of free urine to be seen. One doctor who saw it asked, "Is the patient alive?" The report of expert analysis of urine showed albumen, 2 per cent; broken down cells; hyaline and granular casts; blood a little; pus, plentiful; tubuli that would reach across the field of the microscope doubled up. Threatened suppression, with chronic Bright's disease as a basis. I gave her phaseolus nana twenty-fifth decimal attenuation prepared by myself, a dose once in two hours. Forty-eight hours later she had a fair pulse in both wrists, though weak, but she had such a headache I had to omit the medicine and give sugar of milk. Occasionally I gave her the remedy for a day, but often had to give some other remedy as she was a member of a respectable but poor family who knew nothing of cooking or caring for the sick, but were anxious she should eat something. One day I was called (she was eight miles away) and found her suffering severely from eating griddle-cakes for breakfast! In two weeks she was able to sit out of doors a little while each day with her friends. A weekly examination with heat and acid showed a slow but steady improvement, but it was nearly three months before the microscope showed much improvement. At the end of four months there was a fair amount of urine, and neither heat, acid or the microscope could detect the least disease of the kidneys. One month later from some cause she had a severe attack of vomiting and purging and when I saw her the next day she was beyond my help.

Although this was one of the worst cases of Bright's disease I ever saw, yet so far as one could detect, the disease of the kidneys was entirely cured; and if the patient had not been so unfortunately treated before I saw her and could have had good care I believe she might have been alive and well today.

Taking the cases I have reported as samples where albuminuria disease of the heart and kidneys have been so favorably affected, and it is evident those diseases are intimately connected, and as it has been reported to me that fatty degeneration of the heart and valvular disease of the heart have been cured by this remedy, may we not hope that we have one that promises to fill a long-felt want; one worthy of critical study, not only for our patients but for the world?

BUREAU OF PEDOLOGY

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FRED W. WOOD, M. D.
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STOMATITIS .....WM. W. VANBAUN, M. D.
DISCUSSION: *N. R. Perkins, M. D.; Edward Rushmore, M. D.; J. H. Simonson, M. D.*

SCORBUTUS .....H. E. SPALDING, M. D.
DISCUSSION: *Wm. O. Forbes, M. D.; J. H. Simonson, M. D.; M. J. Chapman, M. D.*

ANEMIA IN CHILD LIFE .....EMILY L. HILL, M. D.
DISCUSSION: *J. H. Simonson, M. D.; Robert Walter, M. D.*

BUREAU OF PEDOLOGY

ADDRESS BY THE CHAIRMAN

ANNIE WHITNEY SPENCER

BATAVIA, ILL.

MEMBERS OF THE INSTITUTE: In opening the exercises of this Bureau I am prompted to express my gratitude for the honor conferred in assigning to me the chairmanship. When I consider the importance of this branch of medical science and practice, I feel my incompetency to properly direct and to present for your consideration the very important questions involved. But, realizing how fortunate the Bureau has been in securing the services of so able a corps of assistants, I approach the discharge of the duties of Chairman with less timidity than otherwise I might have done.

As it is true that Time in its incessant cycle never pauses, so it is equally obvious that from time immemorial the enemies of human nature have seemed to center their destructive energies upon the infancy of the human family. It behooves us, then, as physicians, to strive with never-ceasing diligence in the acquisition of a knowledge of the causes of these destructive forces, and of the agencies that may be used to counteract their baneful effects.

"The health of man is in incessant strife with ignorance, and this struggle commences with the first moments of his life." I predicate, therefore, that the subject of pedology demands a greater degree of thought and study than any other branch or subject which this Institute has to consider. As it has to deal with the very important, yes, with the vital factor of building a firm foundation, or superstructure of health, from the time of the first maternal impressions until puberty, how important it is, then, that we become fitted to put in readiness this little machine before it starts out on its laborious work of thrashing its way out of the struggle. Not only fitting ourselves as physicians, caring for the physical health of the children, but as teachers, instructing the parents respecting their duties in the mental and moral training of the offspring during the incipient stages of its existence, not being content with reducing congenital deformities, but congenital incapacities as well, so that we may be able to deny the truth of the quotation, "One who is born with such congenital incapacities that nothing can make a gentleman of him."

Notwithstanding the diligent and painstaking research which is being prosecuted by the medical profession, excepting, perhaps, in a single instance or two, has there been any marked progress made in the treatment of the diseases of children in a medicinal way during the last year. Or is it true that the school of homœopathy is so nearly perfect in its theory and practice that there is no room for improvement? If we could say that in the last year we had just discovered the "action of each remedial agent used," or, "not to give the same remedy in all stages of a disease," or, "not to give coincidently two or more remedies that are more or less antagonistic in their effects," thereby many a patient is saturated with drugs with little effect upon the cure of the malady from which he suffers. And, again, if we could say, "It is a lamentable fact that the physiological action of drugs is so little understood, and that the remedies are used empirically on some one else's dictum, until within the last year we might herald to the world great improvements in our school of medicine." When we read such statements as above quoted from an old-school journal we cannot but feel that we have not lagged behind in scientific medicine.

It is a gratifying thought that a leading physician of the old school should wake from his Rip Van Winkle sleep long enough to discover the fact that the physiological action of drugs is so little understood by the dominant school. Homœopathy taught this more than a hundred years ago, and from its infancy, then, it has grown, flourished and ripened into sturdy, stalwart manhood; ready at all times to do battle against disease and ignorance; with its motto, *similia similibus curantur,* as true, and as firmly fixed in the therapeutics as are any of the immutable laws in the economy of Nature; and which principle stands an imperishable monument to the honor of our immortal Hahnemann, the father of scientific medicine.

A retrospective view of the practice of medicine for the last century reveals to us the fact that most wonderful discoveries and improvements have been made, not only in the manner of preparing remedial agents, but in the application of them to diseases; and nowhere in all the realm of therapeutics is this more apparent than in the treatment of the diseases of children. Then, in considering the subjects that come before us, let us not lightly pass over the matter of *homeopathic therapeutics,* as applicable to children's diseases, and which has been such a godsend and salvation for the little ones.

Surgery, pathology, bacteriology, serum-therapy, suggestive therapeutics and all the adjuvants to medical science are important and should receive proper consideration; but, in our researches we should be careful lest we become too enthusiastic over some imagined dis-

covery before we have grounds for our enthusiasm; in the meanwhile, forgetting the importance of our *materia medica,* that has stood the test of criticism and trial so long, often casting suspicion upon it, when the fact exists that the error was ours in applying the remedies. What I desire to emphasize is that in our practice we should adhere most strictly to the principle of homœopathy and should not allow fads of any kind to divert our attention from the fact that the *materia medica* as taught by our school is of first importance. Let us not cast it aside because of seeming difficulties which beset our way, nor because we are not always successful in the treatment of every case, nor because we seem to fail in selecting the remedy best adapted to the symptoms, for we may be sure, should we prescribe empirically, we will have turned the hands on the dial of medical progress backward an hundred years, and will have inflicted untold misery upon our children and the generations that shall come after them.

The mixtures called medicines, manufactured and sold by the so-called "medicine companies" which have sprung up recently all over this country, are a complete representation of empiricism in medical practice. They are dispensed by the practitioner who uses them "on some one else's say so," empirically. They are empirical humbugs, which, with the other nostrums called patent medicines, should be relegated to the pharmaceutical scrap heap as unworthy the least attention of the scientific medical investigator.

The ease and facility with which homœopathic remedies are administered, and the marked beneficial results that follow, compared with the dominant school practice, has forced the admission from our opponents that "Homœopathy may be good enough for children." Well, thank Hahnemann for it, for there never was anything before its introduction for the little ones but a physical struggle against disease and ignorance of the medical profession, resulting in the survival of the strongest only.

ACUTE ENDOCARDITIS: ETIOLOGY AND TREATMENT

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In looking over the classification of acute endocarditis one cannot help but be impressed when he remembers the pathology of the disease that no sharp differentiation can be drawn either clinically or anatomically with reference to the intensity of the inflammatory process which occurs in childhood or adult life. Clinically the acute and ulcerative blend. Anatomically it is exceedingly difficult to draw any sharp line between the benign and malignant forms, as all intermediate grades are in evidence. The differences seem to be only those of intensity of inflammatory process, and these variations are doubtless dependent on infection by different organisms. Herrick is of the opinion, which is also shared by the writer, that this classification of the benign and malignant form should be retained for convenience, since we cannot recognize any specific organism causing these conditions; at the same time, bearing in mind that a primary disease may overshadow the condition of the endocardium.

Generally speaking, the bacterial origin of acute endocarditis has received special support by the activity displayed in original research since 1885, by such prominent investigators as Virchow, Klebs, Weischelbaum, Fraenkle, Gilbert, Lyon, Roux, Dreschfield, Osler and Prudden. It is manifestly impossible within the limits of this paper to give a detailed account of the nature of the researches made by these eminent writers, and it must suffice to state the facts which they have established, up to the present time.

It appears to be well accepted that a primary acute endocarditis is occasionally although rarely met. However, in most instances inflammation of the endocardium is secondary to some local or general infection, the varieties of which are familiar to every progressive physician. Relative to the mode of endocardial infection, there has been considerable speculation between Klebs and Koester over the route by which the bacteria are carried to the infected valves. One maintains that the bacteria are deposited in a cusp and the other states that it is carried thither by the fine capillaries situated in the deeper layers of the endocardium. Virchow has shown that the bacteria or toxic elements are by blood pressure forced between the endothelial cells which, if correct, would aid in explaining the phe-

nomena that the left heart is the seat of the endocarditis after birth, and the right during fœtal existence; as is well known, blood pressure is greater in the right ventricle before and in the left ventricle after birth. Another explanation for the localization of endocarditis is that inasmuch as oxygen is necessary to the growth and activity of most bacteria these organisms are most active in blood relatively rich in oxygen. This condition is obtained in the right heart in the fœtus and in the left heart during extra uterine existence.

A most interesting topic presents itself since the simple and more advanced forms of ulcerative endocarditis are of bacterial origin as to what determines the benignancy or malignancy of the affection. This depends not only on the number of bacteria, their progressive propagation and state of activity, but also on the arterial tension and the general constitutional resistance to the virulency of the infection. It may be questioned if age has any distinct predisposing influence in the production of this condition since it is most frequently associated with the diseases incident to child life. This question may be answered in the affirmative, and that girls are more frequently affected than boys.

Rheumatic fever is the disease of paramount importance in which acute simple endocarditis is most frequently observed. The belief that rheumatism is of bacterial origin seems to have been well established by the experiments of Payton and Pain within the last year. This opinion is generally accepted among the more advanced students of internal medicine at the present time. Payton and Pain have demonstrated a typical diplococcus of rheumatic arthritis and associated endocarditis capable of inoculation into animals. This inoculation has been followed by the production of para-arthritis, valvulitis, pericarditis and pleurisy, all of which bear a typical resemblance to the corresponding conditions found in a case of rheumatic fever.

The cause next in frequency in producing endocarditis is chorea. This I believe to be closely associated with rheumatism. Of sixteen fatal cases of chorea reported by Fagg, fourteen showed on autopsy evidence of endocarditis. Since girls are eminently more subject to chorea than boys, endocardial inflammation of this origin is observed more frequently in the former. If the origin of chorea is, as I believe, of a bacterial nature, considerable speculation will at once be aroused as to its prevention and treatment.

Further, simple endocarditis is frequently associated with scarlet fever and measles, in which event it is probably a secondary result of the primary infection. The eruptive diseases, particularly enteric fever and variola, are also capable of predisposing to acute endocardial

inflammations, but more frequently on account of the virulence of these conditions the benign form of endocarditis passes rapidly into the malignant type. Other causes to which infection may be attributable are pharyngitis, tonsillitis, diphtheria, buccal infections, dental caries, suppurative conditions, local or general, erysipelas, pneumonia, pyemia, acute nephritis.

Clinical experience bears me out in the statement that this inflammation frequently occurs in the course of articular rheumatism, with which I wish to regard it as a manifestation and not a complication. Perchance the infective process be of a mild type, it is apt to pursue a mild course and can only be detected by its results when years subsequently the patient discovers that he is a sufferer from a valvular lesion of organic character, dating to some forgotten rheumatic affection. Such an interpretation should be placed on rheumatic fever that the physician will constantly bear in mind and frequently examine the heart, since practical experience has proven many times that it is only recognizable by such means.

If during the first week of a rheumatic infection the temperature suddenly rises and cannot be accounted for by joint involvement elsewhere, the physician should at once examine the heart. If the endocardium becomes involved with or without pericardial inflammation, it will eventually declare itself by physical signs, even though subjective symptoms are wanting to account for the joint involvement elsewhere. In some cases the subjective symptoms may be manifest from the onset. These are probably due either to the severity of the endocarditis or to the associated myocarditis or pericarditis. They may appear in the form of precordial pain more or less pronounced, or an ill-defined sense of depression and distress in the cardiac region. If the little one is small, the child may not be able to describe these symptoms and their interpretation is generally manifested by restlessness. Accompanying this there is palpitation, an active, tumultuous heart, and particularly a subjective sense of dyspnœa which may not be observed by labored or hurried respiration. This feeling may actually amount to orthopnœa in the young child, requiring marked elevation of the head and shoulders. In others, the dyspnœa is paroxysmal, compelling the patient to sit up in bed during the attack.

The pyrexia is, as a rule, mild. In other cases it produces profound constitutional disturbances, with fluctuating temperature and profuse perspiration plainly suggesting endocardial infection. Accompanying this the pulse is soft, more or less empty, irregular, generally

slightly accelerated, and is apt to at once direct the experienced physician to an examination of the chest.

Embolic phenomena are of less prominence in the benign than the more advanced malignant form, yet when they occur the symptoms they induce are referable to mechanical interference with circulation, rather than the local or general septic process. The most frequent seat of the infarcts are in the kidney, intestines, brain, liver and spleen. They occur occasionally without pain, but when the pain accompanies it, it is sharp and lancinating over the affected organ. It is occasionally accompanied by a chill more or less pronounced, with associated pyrexia. If this embolism should occur in the kidney the urine is bloody, albuminous and possibly may contain pus. Hemiplegia and aphasia or an attack of spinal paralysis may, in rare instances, furnish the first or perhaps conclusive evidence of existing endocarditis.

The examination that must be followed should be directed towards finding some local or general infective disease. The position of the child is generally the recumbent, with no desire to move. The apex is displaced slightly to the left and down. The systolic impulse frequently in the fourth, fifth or sixth interspaces, more or less diffused and accompanied by a thrill which may even occasionally persist through diastole. The radial pulse is apt to be collapsing, arythmical, and accompanied with venous turgescence in severe cases. Auscultation reveals the systolic sound dull and muffled, which may be accompanied by distinct murmur or double tone, audible over the cardiac area. The systolic murmur to the left of the sternum faintly transmitted downward. Often this murmur becomes harsh, distinctly muffling the sounds of the heart and only allowing the cardiac tones to be audible when compensation becomes complete.

The course and termination, as has oft been repeated, are equally bearable. The endocardial inflammation may terminate as a simple or benign case, or pass on into the more advanced ulcerative or malignant type. The simple variety may even subside and the child may go on through life without serious impairment of the infected valves; however, the individual is usually left with a chronic valvular lesion.

It is no profound secret that clinical experience the world over accords with the conclusion that when a diseased process has been once firmly fixed there is no means of causing absorption of the inflammatory products and rejuvenating the destroyed endocardial tissue. It must be our aim to prevent them where we cannot cure, and study the efficacy of prophylactic measures. Our efforts in this direc-

tion should not be restricted to the prevention of endocardial inflammation, but should be directed against the predisposing diseases which are so largely responsible for the inflammation of cardiac tissues. It is also well to remember that inflammation of the endocardium is localized and extends by continuity of tissue; while rheumatism seems to jump from one joint to another throughout the body, probably due to reinfection.

Proper attention should first be paid to the general hygiene, with special emphasis on diet, clothing, and habits of the patient. Of great value are all measures calculated to maintain a high standard of nutrition. Children of a distinct rheumatic diathesis should be especially guarded against exposure to climatic changes. Children in whom a rheumatic tendency is observed should be carefully examined frequently for possible evidence of rheumatic infection, and if this is discovered they should at once be given some anti-rheumatic treatment. A new hope was blasted when the salts of salicylic acid failed to prevent endocarditis. The use of alkalies in my hands has met with the same result and a new panacea is now being sought. Another measure often not sufficiently emphasized as to its relations to such an inflammation is protection of the surface of the body. There can be no doubt that by custom the chest of the patient should be bared infrequently, especially during infective conditions, either local or general. While there is no direct vascular connection between the skin and the internal viscera the general law of a close relationship between the vaso motor nerve of an internal part and that of the corresponding cutaneous area has many important therapeutic applications. On this law is based not only the causes of counter irritation, but also those of all internal applications in the treatment of internal inflammation. But in all the inflammatory states of the internal organs this normal sensitiveness to cutaneous impressions is much increased. I wish to go on record as registering an opinion of skepticism concerning the efficiency of local treatment of the precordium as leeches, blisters, and cold applications, as preventive of acute endocardial inflammations. The most rational prophylactic measure which appeals to me is rest in bed during infective and contagious diseases, to prevent traumatisation of the heart due to increased action. Endocardial inflammations are thus often prevented even after all signs of an infective condition have disappeared, and the enforced rest is generally very grateful to the patient. First, the mind must be free from excitement which as much as bodily exercise stimulates the frequency of the contraction of the heart and subjects the valves to strain and possible rupture. Second, the same principle

should apply in the treatment of inflamed valves as in the treatment of infected joints. The use of the latter not only traumatizes the serous lining of the joint, but also increases the congestion and inflammatory exudate. Slowing of the heart action lengthens diastole, and the danger of rupturing the cusp or forming a thrombus is reduced to a minimum.

The remedies most frequently indicated in acute endocarditis are aconite, belladonna, veratrum vir., iodine, bryonia, cantharides, arsenicum, ledum, rhus tox, kalimia lat., and these should be prescribed directly from the symptoms recorded from their physiological provings. Digitalis is not admissible in the treatment of acute endocarditis. It acts as a musculo-motor stimulant, increasing arterial tension. Large doses of kali, or potassium iodide, produce induration, in serous tissues and will relieve the same when given in small doses. If the heart fails to compensate the physician should bear in mind the structural change that has taken place in the muscle fibres. If the muscle of the heart becomes involved, heart tonics may be resorted to and some form of codeine or narceia may be used for its soothing effect. Craetagus given in five or ten drop doses frequently relieves the sharp pain and a marked sense of dyspnœa. Strychnia phos., 3x, 2x or even to one-sixtieth of a grain, is of great value to aid in preventing fatty degeneration of the heart muscles, and at the same time stimulates the heart through its nerve supply.

Should the acute condition assume a grave character, which is manifested by dyspnœa, cyanosis, feeble and irregular pulse, and signs ot pulmonary œdema, the heart must be stimulated by ammonia, camphor, ether, or brandy. This may also be aided by inhalations of oxygen. The child's general health should be well cared for. The diet is all-important. Stimulants should be avoided and good, nutritious food should be given, as milk, eggs, fish, soup, broth, bovinine and many of the prepared foods now on the market. This attention to the diet must be insisted upon from the first, observing rigid regularity as to the hour of eating. It is also well to impress upon the parents of the child the importance of avoiding all articles of diet which will cause fermentation in the stomach or intestines. This distention is followed by more or less dyspnœa, which is due directly to pressure upon the heart. Any evidence of constipation must be relieved by application of the homœopathic remedy, change of diet or the use of salines.

DISCUSSION

A. M. Cushing, M. D.: Some thirty-five years ago, while I was a member of a society in Boston, we were considering heart disease,

and we received a letter from Dr. Price of Baltimore in which he advised us in diseases of the heart with a tendency to hardening of the valves or arteries to use buttermilk. I have tried it a good many times with fine results; and when I could not get that have used diluted lactic acid (like a weak lemonade), also with splendid results. I do not know why it should not be used in heart disease of children as well as in adults.

STOMATITIS

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Stomatitis comprehends the several forms of inflammatory and ulcerative affections involving the mucous membrane of the buccal cavity. It is a common malady in infancy and childhood, and is by no means rare in adolescence, and it is also found in adults, both young and old. The infantile frequency is attributed to characteristic anatomical, physiological and traumatic conditions. It takes three or four months of life to develop the function of the salivary glands and the lack of saliva keeps the mucous membrane of the mouth comparatively dry, for up to this time there is little or no saliva; after the flow is established drooling instead of swallowing the saliva will lead to drying and impoverishment of the membrane. Another mode of infection by means of the saliva rests in the fact that the salivary glands are also excretory organs and at times they eliminate by way of the mouth irritating substances the stomach may have absorbed. The possibility of mechanical irritation and infection in infancy is easily appreciated, for the mouth soon becomes the receptacle for anything and everything and disease may be communicated through the mechanism of sucking, or be directly introduced by the fingers of the infant or attendant.

A review of the literature of stomatitis shows an evident need for a decided reform in nomenclature and for aggressive progress in the bacteriology of the subject. It is now some years since Rotch and Forchheimer brought forward their excellent classification of stomatitis, still "canker," "aphthæ" and a vocabulary of conflicting and misleading terms are the careless but effective shibboleth of much confusion. This multiplicity of names is easily understood and readily forgiven, but they should not be continued even by those most insistent upon an etiological grouping. It must be recognized that the organisms occurring in the mouth are numerous to the point of distraction and that few have been differentiated and established as the known cause of the specific disease in which they have been found, consequently we are forced to adopt for the time being the name of the pathological lesion which exists in them.

In all diseases of the mouth in infants and children the pathological lesion to be recognized is the existence of an inflammation. Sooner or later it appears, so slight in some cases as to be difficult of detection; still it is there, and being present the authorities quoted above

were fully justified in accepting and using "Stomatitis," an inflammation of the mucous membrane of the mouth, as the name best adapted to describe all of these diseases.

Their first subdivision of stomatitis into four groups, "catarrhalis," "herpetica," "ulcerosa" and "mycetogenetica," struck the keynote that brought harmony out of the distraction of discordant terminology. The subsequent divisions work out easily and naturally: First, the catarrhal is subdivided into simple, exanthema (following those diseases), traumatic, arising either from mechanical, thermal or chemical conditions. Second, herpetic or aphthous, suggestive of a parasitic origin not yet detected. Third, ulcerative, due to (a) scurvy, (b) mineral poisons, like arsenic, lead or mercury, (c) arising from other diseases. Fourth, appearing from established vegetable parasites, (a) hyphomycetica or thrush, (b) false membrane, associated or inceptive with diphtheria, tuberculosis, syphilis and similar diseases, (c) gangrenous or noma.

Stomatitis Catarrhalis.—Also recognized under the names of acute, simple, erythematous, pultaceous, and traumatic stomatitis; is the mildest form, and in young infants is simply a hyperæmic condition of the blood vessels causing a general diffused redness of the mucous membrane of the mouth; it is commonly found and lacks clinical significance were it not for the important fact that it is often the starting point for some severer type of stomatitis.

This inflammation may appear in patches, presenting the erythematous appearance, with a surface drier than usual. It may be found to have invaded the entire buccal cavity, taking on the true catarrhal type; with increased redness, more or less thickening, greater functional activity of the muciparous follicles, with some loss of epithelium, leaving the membrane whitish in appearance. Should the inflammation increase it extends to the underlying tissue, causing increased rigidity and stiffening of the cheeks, lips and tongue, with a more or less involvement of the neighboring lymphatic glands, they becoming enlarged and tender. A similar condition of the mouth arises secondarily to the exanthemata. The local causes of stomatitis vary with the age; the mechanical is closely associated with uncleanliness, rough and inadequate mouth washing, or the abominable habit of prolonged nipple sucking, particularly on imperforated nipples, or poorly formed, dirty teats. Unclean feeding outfits, unclean babies, unclean attendants, and the difficulties arising from ineffectual sucking in cases of harelip and cleft palate, are all important causes. Food or drink given too hot, too pungent or too cold, or improperly prepared—the latter not being modified to meet successfully the re-

quirements of the individual case, will not only mechanically irritate but it will lead to an impaired nutrition, and any agency depressing the general health and enfeebling the digestive apparatus will tend to stomatitis. It is found in the families of the well-to-do, when weaning is early, for the choicest and most scientific, artificial food, or the most skillfully modified cow's milk is a poor substitute for good breast milk, and many infants soon develop an anæmia or scorbutus. Later disorders of dentition become a prominent factor, as does also mouth breathing from nasal or post-nasal obstruction. For the part bacteria play in this form of stomatitis we must wait patiently upon future research and investigation, for present-day knowledge is not sufficient for an answer.

The symptom picture is interesting, the lips are unusually full and red, pain is a marked condition, there is heat, stiffness, discomfort and dryness of the mouth with some difficulty on swallowing. If old enough the saliva begins to flow increasingly and becomes acrid, excoriating the corners of the mouth, at times it is viscid and flocculent, occasionally blood streaked, the mucous glands of the cheeks and lips project, looking like pearly white nodules or tiny cysts. The child is fretful, restless, hungry, unable to suck and soon wastes and becomes feeble; frequently there is slight fever, some fetor of the breath, and as secondary conditions there may be vomiting, diarrhœa and even convulsions.

The prognosis is good, running a safe course, there being no danger as long as nutrition is maintained. The treatment demands cleanliness, nourishment and a remedy homœopathically selected. Otherwise serious difficulty may arise and the condition drift into a much severer type of stomatitis. Remove any local source of infection by using a cleansing mouth wash like borax, ten grains to the ounce, or a saturated solution of boric acid, or the chlorate of potash, five grains to the ounce; and an internal remedy like aconite 3x, belladonna 3x, arum triph. 3x, borax 3x, bryonia 3x, kali chlor. 1x, or mercurius vivus 3x.

Stomatitis Herpetica.—Angina aphthosa, follicular, vesicular, canker. Here again we meet with a confusion of synonyms many of which convey but little idea of the pathological lesion. Herpetica seems to be the proper term for use, as it comes nearest a correct word picture of the lesion seen on the mucous membrane, and the objection that it is not definitely settled to be a true herpes is of little importance. Most writers speak of the condition as aphthous, while follicular is falling into disuse because it is recognized that the disease affects the contiguous tissue as well as the rest of the follicle.

Aphthous stomatitis only develops in the mouth when the normal alkaline secretion has become diminished or vitiated through general disturbance. It is characterized by the presence in any part of the buccal cavity of numerous small yellow or grayish patches, or superficial erosions surrounded by a slightly reddened base, which may run together forming a good-size ulcer somewhat conical in shape, but unlike a true ulcer there is never an entire loss of the epithelium, and there is no pus. They suggest a parisitic origin, but no organism has been detected, and no cause either local or general has as yet been discovered. An associate catarrhal stomatitis is always present. It occurs at any age; the usual assigned causes are imperfect hygiene, careless feeding, chronic digestive trouble, scrofula, rickets, phthisis, etc., resulting in certain deleterious influences acting upon the nerve centers, producing an herpetic eruption of the mucous membrane closely resembling herpes of the skin. Cases are infrequently seen in persons who are apparently healthy. The disease may be ushered in without the prodromal constitutional symptoms usual in infancy and childhood. The mouth onset is sudden, being a catarrhal stomatitis with an aphthous eruption appearing in any portion of the mouth, worse inside of the lower lip and on the tip of the tongue, occurring in groups or scattered separately anywheres. The aphthæ may even invade the pharynx, and rarely the larynx. There is pain and salivation, but no odor if not complicated with stomatitis ulcerosa. The condition is self-limiting, lasting about ten days unless the eruption comes in crops, when its course may be prolonged indefinitely. The termination is favorable provided the infant or child is not greatly debilitated from other causes, in such a case the prognosis is necessarily guarded. The treatment is similar to catarrhal stomatitis, special reliance being placed in borax 3x, and arum triph. 3x.

Stomatitis Ulcerosa.—Stomacace, phlegmonous stomatitis, phagedenic gingivitis, putrid sore mouth.

This form is only found in patients with teeth. It is of varying severity, so slight as to hardly call for treatment—so severe as to jeopardize life itself. It usually affects children between four and twelve years, but it is found in all ages. Poorly nourished children, with carelessly cleansed mouths, living in bad environment are especially predisposed. Infection or scurvy are the usual starting causes. While mineral poisons, like iodine, arsenic, lead and mercury (mercurial salivation); many of the acute diseases, measles, scarlet fever, whooping cough, typhoid fever and malaria; and disorders of constitutional origin, syphilis, rachitis and tuberculosis, all favor its development. In fact, anything depleting the system and interfering

with the nourishment, leading to anæmia, will give rise to stomatitis ulcerosa, and, on the other hand, it may come from a purely local cause, like a decayed or sharp, jagged tooth. It is preceded by the catarrhal variety. Histologically it is a molecular necrosis with a surrounding small cell infiltration. The ulceration spread superficially, differing in this respect from the much deeper acting gangrenous type. The presence of a definite micro-organism is unsettled. Following a catarrhal inflammation of a greater or less degree a line of deeper involvement appears along the anterior free border of the gums, usually the lower; the line spreads, the mucous membrane puffs, the gums recede from the teeth, which may loosen and fall out, the gums bleed easily; then follows a yellow line or band of ulceration along the edge of the gums rapidly growing wider and extending, and it may reach all parts of the mouth, but it seldom affects the soft palate. This softening and death of the tissue may go on until the periosteum is reached, and even produce a necrosis of the bone. This is unusual. The tongue becomes furred, marked on the edge with the teeth, the cheeks grow stiff and swollen, moving with pain and difficulty; saliva is increased, dribbling from the mouth during sleep, sometimes giving rise to an eczema on the chin. The submaxillary and tributary lymphatic glands are usually enlarged, but seldom suppurate. The breath and saliva may be horribly offensive; this arises from accumulation of putrid muco-purulent discharges in the pockets of the receding gums around the teeth.

Aphthous stomatitis differs in that its primary lesion seldom, if ever, appears along the free border of the gums of the lower jaw and that it usually spreads to the pharynx, which ulcerative stomatitis never does.

The duration of this type varies with the severity of the attack, and if properly attended to ten days is sufficient even in bad cases. The fetor of the breath calls and receives early attention. The treatment is satisfactory; chlorate of potash, two to five grains to the ounce, frequently used locally, rarely fails. Some patients are peculiarly susceptible to the action of potassium chlorate, so care must be exercised, and should the infant become drowsy, with suppression of urine, a weak heart and some cyanosis, omit the drug at once and use a strong solution of boric acid, or borate of sodium, etc. Cleansing the mouth with sterile water, especially after eating, is of great importance. A weak solution of peroxide of hydrogen is useful, and internally, baptisia, 1x, arg. nit. 3x, merc. sol. 3x, and hepar 3x are of marked efficiency.

Bednar's Aphthæ is a traumatic superficial ulceration on the palate of young infants arising from rubber nipples, or rough mouth washing. Unless they become infected they yield rapidly to cleanliness and a simple mouth wash of boric acid in a 1 or 2 per cent solution.

Stomatitis Mycetogenetica.—Three forms of vegetable parasites occur in or about the human body: Bacteria, yeast fungi, and mould fungi (schizomycetes, saccharomycetes, hyphomycetes).

The mycetogenetic changes in the tissues concern fungi products, and our special interest is in *Stomatitis Hyphomycetica,* commonly called thrush, sprue, soor, or muguet, it is practically a stomatitis catarrhalis with a fungous growth, presumably of a parasite called saccharomycetes albicans. The fungus may be found on any of the mucous membranes of the body. It gives rise to characteristic white patches or flakes resembling minute pieces of curd of varying sizes, on the dorsum of the tongue, the palate, and the inner surface of the cheeks, and may extend to the tonsils, pharynx and œsophagus, and the lumen of the latter may be nearly closed by the growth.

Thrush may attack healthy children, but it has a predeliction for the weak and debilitated. It is conveyed by infection. It attacks the mucous membrane lined either with pavement or cylindrical epithelium. It requires considerable force to detach the patches owing to their being covered by a layer of epithelium. On removal they leave a raw surface bleeding on slightest contact. The spots are due to spores which develop between the epithelial cells and then spread upwards to the surface and downwards to the connective tissue. There is no other change in the mucous membrane. The symptoms are at times so slight that the condition is only discovered by inspection. In most cases, however, there is pain, an associated catarrhal stomatitis, and gastro-intestinal irritation. Sometimes the removal of the patches leaves ulcers remaining difficult to heal.

The diagnosis is rendered easy, by means of the microscope settling the disputed points between milk and curd, or other forms of stomatitis. The prognosis is good, private cases responding rapidly to treatment provided debility is not too pronounced. Hospital and institutional cases are more rebellious.

The treatment calls for care and cleanliness. If the fungus exists it is to be wiped off every two or three hours with soft linen, or an absorbent cotton swab, saturated with a strong solution of boric acid, and the underlying raw surface thoroughly rubbed with the same solution. Permanganate of potash in the same manner is helpful. The constitutional condition is to be brought up to a good standard by diet, hygiene and medicines like arum triph. 3x, æthusa 3x, and arsenic 3x.

The pseudo membranous forms of stomatitis, of diphtheria, tuberculosis, syphilis and similar diseases is a type of inflammation of the mouth with the formation of a pseudo-membrane which is cast off in the course of a few days, leaving a raw, ulcerating surface. It is a rare condition, particularly so as a primary disease. The symptoms are not especially characteristic, pain, fetid breath, increased saliva, at times mixed with blood; lymphatic enlargement, etc. Should free hæmorrhage from the mouth be present the outlook is not good. The prognosis will naturally be guarded, especially in cases of diphtheritic origin.

Stomatitis Gangrenosa.—Noma, cancrum oris, water cancer. This is the rarest and most fatal form of stomatitis, occuring in childhood, appearing usually in cachetic children between the second and eighth year. It is a gangrenous process, unilateral, as a rule beginning on the gums and inner surface of the cheek and spreading with great rapidity to the adjoining tissue, perforating the cheek, and dipping deep and attacking the bone as well, destroying completely all the parts involved. It is not self-limiting and advances steadily until death relieves.

The healthy child ordinarily escapes, the unfortunate is the victim of dirt, overcrowding, neglect, starvation, or any state destroying the vitality and resistance of the child. Measles and typhoid fever render the patient liable to the infection, and at times it follows ulcerative stomatitis. It is more common in damp, overcrowded countries like Holland and India, and in damp seasons of spring and fall. The infectiousness of the disease is debatable, no micro-organisms having yet been found whose connection with the malady is a certainty. The claim that it is merely a local gangrene is not satisfactory when we consider the highly vascular tissue of the cheek, even if it is in a child cachetic and of low vitality.

Owing to the rapidity of onset and progress the earlier changes that take place are doubtful; there are few constitutional symptoms, the first sign is a bleb or a blister on the mucous membrane of one cheek or gum, or it may only be an induration of the cheek itself. The slough forms rapidly, without hæmorrhage on separating, owing to the previous plugging of the vessels with thrombi. The first symptoms noticed may be an intense fetor of the breath and saliva, with a slight involvement of the submaxillary glands; fever, if present, does not run high, there is practically no pain, and but little discomfort, the pulse is always weak, soon becoming rapid and feeble; exhaustion is pronounced, being followed by collapse and death. If recovery should occur, convalescence is tedious, and the loss of the

involved tissue with subsequent scarring disfigures for life. The mortality is high, from 80 to 90 per cent. Septic pneumonia is a fatal complication.

Treatment must be prompt and efficacious. It is surgical and calls for the immediate removal of the whole of the gangrenous material and considerable tissue beyond the zone of involvement either by knife or cautery. Earlier, as soon as manifested, cauterization with nitric acid or some equally strong cautery; first scraping or rubbing away the slough, then keeping the wound and exposed surface aseptic may be of service. The child is to be isolated and supported with a simple, highly nutritious diet and stimulants.

DISCUSSION

N. R. PERKINS, M. D.: I have had the pleasure of reading Dr. Van Baun's paper, but he leaves little for discussion. He has gone to the bottom of the matter, and has winnowed the chaff from the wheat. The classification he has placed on record with us cannot but be of help to every practitioner. In the matter of treatment I can only add but little. In cases of stomatitis, whether catarrhal or ulcerative, flowers of sulphur used as a dusting powder has helped me out in several bad cases.

A few indications gleaned from Ruddock may not be amiss, for I am a believer in the homœopathic remedy.

Mercurius.—Fetid breath, fetid saliva, abundant saliva; looseness of the teeth; flabby tongue, with imprint of the teeth on sides; looseness of bowels; scalding evacuations; worse at night.

Hydrastis.—Dark red swelling of the cheeks and gums; tenacious mucus.

Arsenicum.—Ulcers on the borders of the tongue; bleeding of the gums; debility, with the peculiar restlessness of arsenicum.

Borax.—Ulceration of the gums, which bleed easily; especially when accompanied with the fear of falling; child cries when the mother is putting it in the crib.

Dulcamara.—When caused from taking cold, accompanied with swelling of the glands of the neck.

Sulphur.—When other indicated remedies fail. This is an old indication, but nevertheless valuable.

Ruddock also gives this differentiation: Nux is more useful in lean persons than in the fleshy ones, where sulphur is indicated. The nux person leads a sedentary life; the sulphur one would prefer to. The nux person is constipated; the sulphur one has fetid diarrhœa. The sulphur patient has a thick, whitish or brown coating on the tongue,

while the nux one has the tongue covered with mucus. This is all I can think to discuss of the very excellent paper by Dr. Van Baun.

EDWARD RUSHMORE, M. D.: I wish to make a remark for consideration in regard to the local treatment of the non-surgical inflammatory conditions of the mouth, and it is this: that in addition to what may be a bacteriological factor in causing the disease, there is the personal element which may be more or less active always in causing symptoms of disease, and in this personal element we may find an expression of what the system needs. Now, if you apply local medical treatment to an inflammatory condition, you may do one of two things: You may either hinder the action of the internal remedy which may be of the highest constitutional value to the patient throughout all his coming life; or if that is not acting beneficially we may so hide nature's expression of her need in the local condition as to prevent ourselves from thereafter seeing and giving what the patient needs for his life-long health.

J. T. SIMONSON, M. D.: In discussing the therapeutics of stomatitis, none of the *kalis,* excepting *kali permangan.* locally, and *kali carb.* have been mentioned. I have found *kali chlor.* of the utmost value.

Kali bichrom. is another of the kalis which has done me good service,—a remedy which I believe is frequently passed over when well indicated. The ulcer tends to burrow, is small in circumference and the stomatitis is frequently accompanied by a low temperature, weakness and cool surface.

In the ulcerative and aphthous forms, particularly in the ulcerative form occurring in cachectic debilitated children, the mineral acids—muriatic, sulphuric and nitric—are of the utmost importance.

I have seen cases of ulcerative stomatitis, in hospital and dispensary practice, which had refused to yield to any form of treatment, local or internal, clear up rapidly when put on the mineral acids.

The usual indications for these drugs are of much value. Briefly speaking, *muriatic acid* is called for, by a dark bluish discoloration of the edge of the ulcer and the immediately surrounding mucous membrane and a blackish base.

Sulphuric Acid is very useful, especially in marantic and diarrhœal cases with yellowish discoloration of the mouth and ulcer, and yellow sour stools. The ulcer tends to spread superficially.

Nitric Acid does good work when the ulcers tend to burrow deeply rather than spread on the surface. The tongue and gums are apt to be whitish in color.

INFANTILE SCURVY

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Scurvy is common to people of all ages and climes. Its cause is pretty generally understood to be dietetic. The fact that the exact nutritive elements which, being withheld or furnished in excess, induce it remain undiscovered has led to various theories. It has been attributed to intestinal auto-infection; to acid intoxication; to micro-organisms that find their way into the circulation through the lesions of the buccal cavity; to epidemic infection; to a deficiency of potassium in the blood; and to simple monotony of diet. Deprivation of a vegetable diet is a recognized cause of the disease. Nevertheless, the Eskimos have no vegetables and are practically free from scurvy. On the other hand, during the potato famine, whole communities in England and Ireland were ill with it. They had meat, but were deprived of an article that had formed a large part of their dietary. This, the potato, is known to possess a peculiar property, common to many other foods, that is called anti-scorbutic. Just what this property is no one knows. Doubtless an impoverished condition contributed somewhat to the result, but the immediate cause was the sudden deprivation of a food that long and free use had made a necessity. The Eskimos, never accustomed to vegetable diet, thrive without it. Meats have anti-scorbutic properties, especially if fresh and uncooked, and the Eskimos eat much in that form. Unlike most vegetables, animal products seem to lose their anti-scorbutic properties by thorough cooking. Scurvy was not recognized as a disease common to infancy until 1883, when Barlow called attention to it with a detailed report of thirty-one cases. Previously the condition went under the name of marasmus, rheumatism, anæmia, acute rickets, etc. Like mistakes have not been uncommon with physicians of repute up to a very late date. It is well within the last decade that one of Boston's most noted physicians, a specialist in diseases of children, whose book is used in medical schools as standard authority, and who has been a most persistent and uncompromising advocate of sterilized milk, told the parents of a child in extreme scorbutus that he had a great many such cases, and he could only account for them as a peculiar kind of rheumatism following grippe. In this case uncooked milk and raw beef juice brought about a speedy recovery.

From careful observation it is evident that infantile scurvy is caused by giving the child food which lacks certain elements needed for its nutrition, or which furnishes them in such a form that the child cannot

assimilate them. The fact that of several children fed on the same kind of food some became seriously scorbutic, while others are but slightly affected, and others not at all, seems to indicate that some other element than the food acts as a contributing cause. This may be some constitutional dyscrasia. An inherited syphilitic taint has been suggested as a predisposing cause. When mothers generally nursed their babies the disease was less common than now. The increased prevalence has kept pace with the introduction and use of condensed milk, proprietary foods, and, the later and most pernicious of all, sterilized milk. Unfortunately vital statistics cannot tell us the number of lives that have been sacrificed to these laboratory products, because the real conditions not being recognized, the deaths have been assigned to other causes. Probably mortality reached its maximum from five to ten years ago, when sterilized milk was on the high tide of popular favor.

As far as this disease is concerned poverty has been the infant's safeguard. The mother in poverty cannot afford proprietary foods, laboratory milk, or the apparatus and time for sterilizing milk at home. She must nurse her young or feed them on common cow's milk and such other articles of food as the family table may furnish, and the caprice of the moment suggest. These last foods may be disastrous in other ways, but the little one is not the victim of scurvy, with its prolonged suffering. It is only the well-to-do and wealthy who can afford laboratory foods, and among them the disease has been most prevalent.

Most proprietary foods are prepared with more or less milk. If the milk is "live," uncooked, and not too much diluted they are not generally harmful, but in many cases very beneficial. Without a free supply of "live" milk they are, without exception, harmful.

Besides other qualities, not pertaining to this subject, which render condensed milk unsafe, its anti-scorbutic qualities have been destroyed by the process of preparation. I never saw a healthy child which had been fed several months on an exclusive diet of condensed milk.

Perhaps nothing so undeservedly and yet so completely found favor with the profession and laity as sterilized milk. Its advent was coeval with the excitement attending the discovery of microbes, and it having been found that prolonged high temperature destroyed them, it seemed reasonable that milk should thus be freed from germs. It was found that sterilized milk could be kept several days without becoming sour. This and the long proved efficacy of a boiled milk diet in acute diarrhœic troubles seemed to argue in its favor. With these things and a backing of laboratory investigation, scientific in appearance, there is little wonder that it was at once accepted. So enthusiastic were its ad-

vocates ten years ago, that those of us who dared condemn, or even question its use, after having tried it and seen its baneful effects, did so at the peril of losing caste as scientific and up-to-date physicians. In Boston was established the first milk laboratory in the world. The fever for sterilized milk ran high, and most grievously did the babies suffer for it. After a time it was discovered that a temperature of 212 degrees (F.) was not necessary for the destruction of morbific germs; that keeping the milk at a temperature of 160 degrees (F.) for a few minutes was sufficient. This was called pasteurizing, because sterilized milk was fast losing favor. Babies fed on this still became scorbutic. Now, lest milk laboratories be relegated to innocuous desuetude, it has been declared that milk must be modified. It must be separated, as far as possible, into its primitive elements, and then, in clumsy imitation of nature, put together again. This milk manufactured from milk may be pasteurized or not according as the attending physician thinks the child's condition demands.

That feeding a child on cooked milk, other than temporarily for some acute intestinal trouble, is always harmful there is abundant evidence to prove. This evidence comes from experimental use in both hospital and private practice. Of the many reported experiments time will admit of reference to only one of recent date. Dr. E. M. Sill (Med. Record, Dec. 27, 1902) reported observations made in a large dispensary, which furnished food prepared according to the latest approved laboratory methods. Appliances for doing the work were perfect, the bottles were absolutely clean and sterile, and were distributed daily by competent and reliable nurses. The cases were individualizd and the milk was modified according to the apparent needs of each child. During the three summer months the milk was sterilized, the remainder of the year it was pasteurized. A careful watch was kept of these children. Of the entire number thus fed 97 per cent showed unmistakable signs of rickets or scurvy. It is fair to presume that the mothers of the other 3 per cent were careless, and disregarding instructions gave other foods. Of these children forty had the breast excepting five to seven feedings daily. All of these, even, had symptoms of rickets or scurvy, but in less degree. Some still advocate cooking the milk. Holt (Infancy and Childhood, p. 211) says: "It is undoubtedly the milk formula employed which is at fault, and not the process of heating." In answer to this, cases are reported where the formula was continued and the sterilizing stopped, and recovery resulted without other treatment.

Breast-fed babies sometimes have scurvy, but less frequently than formerly when nursing mothers restricted their diet to bread, meat and

nutritive drinks, instead of the liberal and varied diet, including fresh fruits and vegetables, generally used to day. To account for these cases the flow of milk has in some instances been found deficient in quantity, in others there has been a free flow, but the milk has been deficient in proteids, and it is probably also deficient in some other property that has not yet been discovered. A woman employed as a wet nurse continued to nurse her own child. Her child continued well, while the other had scurvy. The scorbutic child either was deprived of its full share of food or had a predisposing dyscrasia.

Monotony of diet has seemed to be a cause of scurvy in the adult. If in the adult it may be in the child. The nursing mother's life is one of variety in physical exercise, in psychological conditions and in diet. The result is that the breast-fed child has no two feedings in a day that are exactly alike. A cow's milk will likewise vary somewhat one day with another, and milk from several cows mixed is found better for a child than the milk from one cow. This is another element to be taken into account for the disastrous results attending laboratory prepared foods, whether they be proprietary foods or modified milk. If foods thus prepared are day after day made of elements in exact proportions, one with another, as is claimed for them, we are not following nature's way, and the nearer we imitate nature in preparing food for the bottle-fed baby the more surely will we have a healthy, robust child.

While the symptoms of infantile scurvy are distinct they are not constant in all cases. Generally, however, a sufficient number of distinctive symptoms are present to lead the careful observer to a correct diagnosis. The symptoms do not appear in an established sequence. While in a condition of apparent health a child may abruptly develop symptoms that are ordinarily looked for in advanced stages of the disease.

The symptoms may be classified as follows:

1. A general cachexia, increasing anæmia, flabby muscles, emaciation.

2. Offensive breath, flabby tongue, perhaps sore mouth, swollen and bleeding gums, discoloration and ulceration around erupted teeth.

3. Skin dry, pale or sallow, ecchymosis in various parts of the body, petechial spots on limbs and abdomen.

4. Appetite capricious.

5. Bowels inclined to constipation with clay colored stools, or greenish, mucoid, diarrhœic discharges, occasionally traces of fresh blood, but oftener dark, tar-like matter, indicating blood that has been subjected to intestinal changes.

6. Urine diminished in quantity, dark and laden with urates, except in cases caused by too dilute food, then the quantity may be nor-

mal or increased. Bloody urine. In my personal experience this has been very generally present in fully developed cases, which seems to be contrary to the recorded experience of others. Often pretty early in the disease the napkins will have an unmistakable pinkish hue, as though wet with bloody water.

7. Fever is not generally present, unless there be some complications, and then seldom more than one or two degrees.

8. Hyperæsthesia is often the earliest symptom noticed. It may be confined to one leg but usually extends to the other, and later to the arms. The least movement of the affected limb causes severe pain. The child learns to fear being handled, and will often cry at the approach of the nurse; is comfortable and free from pain if let alone. If the child's attention is diverted the limb may be rubbed or quite firmly pressed upon with little indication of pain, so long as it is not moved. Pseudo-paralysis, or disinclination to move the limb is a natural sequence of this hyperæsthesia. The child lies on its side, leg drawn up, semi-flexed and the foot drooped. There is a peculiar œdema of the dorsum of the foot. It does not pit on pressure and the tissues are semi-translucent. If the upper extremity is affected the forearm is semi-flexed and rests on the chest. The child will lie in this position for hours and gets the credit of being a good child, for it makes no complaint while undisturbed.

9. Swelling around the large joints, especially the knee and ankle. It is most marked just above the joint, and extends upward along the bone. There is no redness of the skin, nor local increase of heat. As the disease advances this swelling of the soft tissues subsides somewhat and is confined to the lower half of the bone. Deep pressure reveals a firm, fusiform enlargement of the shaft, which is due to subperiosteal hemorrhages. The degree of this swelling varies. These hemorrhages are usually confined to the femur, tibia, humerus and radius. The only flat bones liable to be thus involved are the cranium and scapula.

10. Fracture or separation of the involved bones at the seat of tumefaction. Crepitation is absent, and the ends of the bone cannot be detected through the soft tissues and mass of extravasated blood.

11. Hemorrhages from the bowels, kidneys, mouth, nose and stomach. Rarely from the ear, or into the orbit causing exophthalmus.

The diseases with which it is most frequently confounded are purpura hemorrhagica, on account of the bleeding from the mucous surfaces, the ecchymoses and petechiæ; with rheumatism, hip-joint disease and paralysis on account of the pain on movement and the swelling and pseudo-paralysis; and with rickets. Purpura differs from scorbu-

tus in the absence of hyperæsthesia and pseudo-paralysis, or deep subperiosteal hemorrhages and bone separation, and of spongy bleeding gums. The hemorrhage is more superficial, being confined to the mucous surfaces and sub-cutaneous tissues.

Rheumatism differs in the absence of all hemorrhagic symptoms, cachexia and spongy gums. In rheumatism the swelling on the limbs is attended with heat and redness, pain while quiescent which is sometimes relieved by motion. Hip-disease differs with the absence of hemorrhagic symptoms and spongy gums, and of swelling above the knee and ankle, and in the presence of fixation. Paralysis differs in the absence of hemorrhagic symptoms, swelling around the joints and cachexia. A little discrimination will discover that the immobility is not from want of muscular power, but from pain incident to movement. The reflexes are normal or increased. The sphincters are unaffected.

Rickets has symptoms resembling scurvy and sometimes both diseases are present. It differs in the absence of hemorrhagic symptoms, and in the presence of prominent abdomen, sweating around head and shoulders, bending of the long bones, enlargement of joints, deformity of the thorax and misshapen head.

Pathology: The inner layer of the periosteum and the lines and areas of ossification, which are points of physiologic congestion and active growth, are seats of hemorrhage. The bone beneath these hemorrhages is absorbed. An attempt at reconstruction is shown by the development of new tissue, but it contains few bone-trabeculæ. Cartilage cells proliferate freely, but atypically and there is no formation of bone. Hemmorhages are found in the tissues of the liver, lungs and spleen. The kidneys show catarrhal nephritis. The mucous membrane of the intestines, more especially of the colon, is thickened and studded with follicular ulcers.

Treatment is most essentially dietetic, in short, with proper food most cases recover speedily without the aid of medicines. The diet should be good, healthy breast-milk if possible. This is seldom available for the reason that when scorbutus develops the bottle-fed child has reached an age when it will refuse the breast. The next best is good "live" milk of the cow. The proportions of cream, milk, water and sugar of milk must be determined by the age of the child and its digestive powers. Usually very little milk can be given at the start, but it can be added in increasing quantities day by day. On no account use laboratory milk. The milk must not be cooked nor put through the separator. The cream used should be obtained after the domestic manner of "setting the milk" and either skimming off the

cream, or syphoning off the milk and leaving the cream. The juice of raw beef, slightly salted, should be given three or four times a day. The little patient usually takes it with marked avidity. Orange juice, or fresh grape juice, or scraped raw apple are valuable as anti-scorbutics and for the relief of the usual constipation. Even some diarrhœa does not contra-indicate the grape or orange juice.

The three remedies I have most often found indicated are Arsenicum, Phosphorus and China.

DISCUSSION

WM. O. FORBES, M. D.: I have listened to the paper of Dr. Spalding with a great deal of interest from many standpoints. The etiology of this disease, scorbutus, is, I think, of great importance, and our attention is called to it as a separate and distinct disease from rickets or some particular form of rheumatism, and so on. Sterilized milk has been abandoned entirely and pasteurized milk very nearly so. I think there are few physicians at the present time who are prescribing pasteurized milk rationally and at the same time developing scurvy in their cases. I believe in taking a chance on avoiding intestinal trouble by giving this form of milk. It must be studied carefully, and it must be prescribed rationally, as you would give a prescription. But not the milk alone. The orange juice the doctor spoke of is *the* one remedy indicated in scorbutus in any of these cases. Even an infant one week old can be given orange juice in teaspoonful doses, increasing the quantity as the child grows older; at the same time give milk pasteurized and I do not think it will have any disposition to scorbutus. I know that in cities where the milk has to be shipped in from the country and is handled by many different people, it is almost impossible to get an article of which you can say to the mother that she can use it indiscriminately and safely. That is utterly impossible. Then we must use something to overcome this particular form of milk. Now, what other means have we of destroying any germ product that may be there other than pasteurizing or sterilizing? I will set aside sterilizing, for I think pasteurizing and following up that form of milk with orange juice given before the feeding three or four times daily will overcome any disposition which predisposes to scorbutus.

The doctor speaks of poverty as a protection. That is true. It is a protection in this way: Our dispensaries in the cities today are so overrun that people who go there and get prescriptions for their infants are getting a rational prescription by one who is up in the diseases of children; and if they follow that prescription they usually get along without any trouble.

Now, there is another thing, and that is, there is not the same tendency from the standpoint of dyscrasia truly established of a specific nature, among the poorer class that there is in the well-to-do classes of people. I do not mean to say that the majority of people of the well-to-do class in this country suffer from specific diseases; but I do mean to say that we find our more delicate children among the better class of children, for at the present time children are not raised as they should be raised among our best class of people. There is too much of this putting babies on the bottle; that necessarily weakens that child. There is too much of employing of wet nurses, or something of that sort, instead of the mother nursing the child. That condition necessarily weakens the child, because, as Dr. Spalding says, you take a wet nurse and her own child will prosper and get along nicely on the mother's milk, while another child of the same age cannot get along on the same food. It is something in the make-up of the child; that is, one is of the same flesh and blood, and another is of a different make-up entirely. There may be some dyscrasia back of that child which is accountable for that. But I do mean to say this, that I think it is an advisable plan, in the better class of people where you have this condition develop, where the mother is nursing the child or rather the mother is not nursing the child, to go to the bottom of any family history, and look for anything that may be responsible for this condition. Of course, we have various forms of milk and different feedings during the day: the first may have been a rich food; at the next feeding it may and very often is a poorer class of food or not as good as the one previous; and so on. Those conditions must be watched; the milk must be examined, and whenever you find that there is a condition existing which is not proper, I believe in giving the indicated remedy; and I think the indicated remedy for scorbutus, whether in the nursing or bottle-fed baby, is orange juice. Beef juice is equally good, in the purely raw state. It is anti-scorbutic; otherwise the anti-scorbutic properties are lost.

The milk laboratory has been a curse in a way for the simple fact that it has given prescriptions indiscriminately to everybody. A physician may send an order for milk, not knowing whether the child wants one-fourth, one-sixth, one-eighteenth, or one-twentieth per cent of fat. Unless the exact quantity is known the prescription cannot be successful. We cannot take any form of food in any state and give it, but we have to add such things to the milk as are needed in order to get it as near to nature as possible.

The pathological symptoms given by Dr. Spalding certainly cover the entire field, and those that followed closely will agree that a child

that is in that condition is in the last throes of scorbutus. Of course, we do not see the average child as far gone as the symptoms given, but when they do get to that point there is a dyscrasia as a rule which is back of the condition which will allow a child to get into the low state described.

There is a difference in the degree of infection, as the Doctor has said. Allow three children to feed on the same article of food: one will develop scorbutus in a mild manner; another a little more severe; and the third one may escape entirely. The food is not responsible for that in my mind. It is the make-up of the child. There is a constitutional condition there which makes the child more susceptible to disease. One is much more susceptible than the other. One child is stronger than the other. The stronger child will throw off this condition, while the weaker child cannot, and must necessarily succumb.

In closing I want to say this: that I appreciate and agree with Dr. Spalding in his paper throughout, with the exception of using pasteurized milk. You know what it means to a bottle-fed baby, to put it on the live milk that we get in this city. It means death to the child in the summer time. There is no question about it. It will develop a sub-acute diarrheal condition, sub-acute and chronic milk infection. We have had it time and time again, and I think it is much better to use sterilization for an infant; give something which will open up the tendency to develop scorbutus and in that way you will avoid this dreadful disease and not have the trouble which has been pointed out.

J. T. SIMONSON, M. D.: There is one point on which I cannot agree with the essayist; that is in regard to syphilis or tuberculosis as direct causes of scurvy. Syphilis has been positively denied as a direct or essential cause of rickets by practically all modern observers, and I believe the same holds true of scorbutus. To my mind, the proof of its dietetic origin is indisputable, and I think, also, that sterilization plays a most important role as a cause, frequently, being the only one.

MILLIE J. CHAPMAN, M. D.: I want to say in the investigations of this condition, both Cheadle and Barlow have observed that among a certain class of people that had the habit of giving their children tea there was sure to be a number of cases of scorbutus. In looking this up I have had some experience in this line. I have had children that were kept upon malted milk, and the nurse, being very fond of tea would also give it to the child, very severe cases of scorbutus afterwards developing. One very interesting case I was called to see was not of our race, but I explained so carefully that I was certain they understood me. I prescribed grape juice and scraped apple; later I

learned that elderberry jelly put in water made the drink that was given, and scraped carrot took the place of the apple. But there was marked improvement in the little sufferer. I thought I had convinced them that scraped apple was the thing to have, but it seems that carrots were easily obtained and they concluded that the child would like it better and it would do just as well. I had another case that came under my care for a little while during the absence of the attending physician. I think I saw it four or five times. It was a child ten months old, that had been fed upon malted milk its entire life, as the mother died on the tenth day. The nurse fed it plenty of tea and used it herself. When the pains were first noticed it was decided to be a case of rheumatism. This was the day after I stopped going, after the family physician had returned. The suffering of the child continued and the physician called in council of his own school, but decided it was spinal trouble. He put the child in a plaster jacket, which later was replaced by another form of jacket and for three years that little girl wore a spinal jacket. It was a rachitic child, but there was nothing ever wrong with the spine. Though they called it an invalid, the child can run about and is a spoiled child, as many invalid children get to be. But the evidences of rachitis and of scurvy were there and instead of recognizing that they gave surgical attention. The little child was active, and occasionally stole from the table articles not given it and from that habit recovered more than from the attention given.

H. E. SPALDING, M. D.: I have very little to say in addition to what I have already said in the paper. I have found it impossible in the time allotted to treat the subject thoroughly, although I have condensed my ideas as much as possible. I appreciate the gentleman's remarks in regard to dyscrasia. I do not myself believe that there is a syphilitic taint back of scorbutus. I believe that there may be some dyscrasia existing in the child, but it is not positively known what it is. I do not think it is necessarily syphilitic. The mother's milk sometimes develops scorbutus in the nursing child. It is a recognized fact that certain foods possess anti-scorbutic properties, but what the anti-scorbutic property is no one has been able yet to find out. When nursing children develop scorbutus, I have no doubt whatever but that that particular property, whatever it is, is wanting in the mother's milk. She is in an abnormal condition, her milk is not fit for the child to take and it is wanting in some or more elements. I do not believe it is simply a deficiency in proteids in foods that causes scorbutus. We do know this, that cooking, even cooking fresh blood, destroys the anti-scorbutic properties, whatever they are. It destroys their life, be it germ or chemical substance.

I will acknowledge that I advocate during the hot summer months giving to our poor children in the cities, where milk freshly drawn from the cow cannot be obtained, a supply of pasteurized milk, but not for prolonged feeding. Perhaps for only the two months, when they are most liable to have these summer troubles. I recognize that of two evils it is, perhaps, the lesser. I believe it is bad in the end as is sterilized milk, but not quite so in degree. It does not show its ill effects so soon.

In regard to modified milk, I cannot agree with the ideas advanced, because I do not believe, in the first place, that it is ever done thoroughly and accurately. I believe we have here in Boston as good an establishment as there is in the country for modifying milk. I have seen and used this modified milk. One day there would be quite a perceptible body of cream on the top of the bottle; next day not a particle. It thus varies from day to day. That is why I said in my paper, if they are accurate in it, they are not imitating nature, because they do not give the variety of food that the natural mother furnishes her baby. The natural mother milk is not the same at different feedings through the day.

The various milk laboratories claim to furnish milk from healthy cows, which are fed and housed according to the best known methods for keeping them healthy, and the milk is drawn and distributed to customers under the best conditions and strictest care to prevent its becoming germ infected. This if used raw and modified to resemble human milk by adding the proper proportion of water and milk sugar to the "top half or two-thirds of the mill," is all right, but I do not believe in using the separator. Those fat globules can never be got together again as they were before. You cannot make the perfect emulsion that nature has made and if you once break up that emulsion it can never be restored. I do not believe man's laboratory work can ever supplant the work of nature's laboratory.

J. T. SIMONSON, M. D.: I do not intend to take up the time of the Bureau with a long discussion, but merely to make a plea for the more frequent examination of the blood in the disease of infancy and childhood.

Our knowledge of the blood of infancy is, as one might say, in an embryonic state, and so much remains to be done, especially in the realms of differential diagnosis, that as yet there is comparatively little in infant haematology that is of use in every-day clinical work; but I believe that the small amount of definite knowledge that we have is of the utmost value.

The single fact, alone, that the anaemias of infancy are so fre-

quently fatal, renders a careful blood examination of the greatest value for the purpose of diagnosis and prognosis; and, although these cases are not of very frequent occurrence, they are numerous enough to warrant our making routine blood examinations in all cases of anaemia in infancy in which the cause is not immediately apparent.

Leukaemia, I believe, to be very much more common in infancy than is usually supposed. The lack of reported cases is largely due to the lack of time and inclination of the great bulk of the profession to perfect themselves in the necessary technique, and to the lack of recognition of the importance, to diagnosis and prognosis, of such examinations.

A great source of error and therefore of erroneous conclusions, confusion, and lack of confidence in the teachings of haematology, is the failure to realize the marked qualitative and quantitative differences between the blood of infancy and that of adult life. I do not think that the importance of these variations as stated by the essayist can be overestimated—for instance: the normal leucocytosis (?), lymphocytosis, also the leucocytosis of digestion—the larger number of normoblasts in mild grades of anaemia, as compared with the adult and the lower haemoglobin percentage after the early weeks. Cabot says that to make accurate deductions, diagnostic or prognostic, from the blood of a child, it is indispensable to know the age and degree of development.

This applies with much force in the estimation of the degree and diagnostic importance of a supposed leucocytosis in a case of acute illness.

The value of blood examination in the differential diagnosis of typhoid and malarial fevers is too well known to need comment, and yet how few physicians ever think of making a blood examination, or having it made for them, when in doubt about a case of this kind. I believe that typhoid fever is far more frequent in infancy than is usually believed and it is almost always unrecognized because the course of the disease is so different from that seen in the adult that before the days of blood diagnosis its occurrence in infancy was practically denied and the majority of physicians will not take the time and trouble to make the diagnosis for themselves. In these cases the presence of the Widal reaction, the leucopenia and the increased percentage of lymphocytes will give absolute evidence of the presence of typhoid when the clinical symptoms are meagre or extremely misleading.

If haematology did nothing more for us than to make certain the diagnosis, or exclusion of malaria or typhoid in a doubtful case of

illness in a young child, it would well repay all the time given to its investigation.

ROBT. WALTER, M. D.: I should like to make a suggestion in reference to the eminent lecturer who said that in certain cases nature must surely have adapted the stomach to the food, inasmuch as the food was so poorly adapted to the stomach. The suggestion I wish to make is this: that if nature did not adapt your stomach and mine to the food, when we go traveling, I do not believe we would be alive, there would be a good many dead people around here to-day. Fortunately nature is organized upon that principle. Self-preservation is a primary law of life, as the great Hahnemann recognized, and nature is able to adapt herself to much that you may impose upon her. The food you eat, if it is not the best, is at least such as she must take if you give it to her. The air you breathe, the water you drink or whatever it may be she will do the best she can with it, and so adapt herself to these things and preserve existence. There is just one thought growing out of these facts, namely, that what is needed above all things, in order to the maintenance of health and the preservation of life, is *constitutional power*. That, I suppose, you and I have not provided for ourselves. Somebody provided it for us. But there is another thing that we *may* do: We may conserve that constitutional power. We may protect ourselves in every possible way by eschewing unhealthful habits; by doing, each one of us, day by day, what is necessary to the preservation of the highest degree of health in order that our children may enjoy the benefits which come from our own good habits. I believe that we grown people should learn the laws of life, and practice them ourselves and the children would need much less care, and there would be fewer deformities in life.

EMILY L. HILL, M. D.: I agree with Dr. Simonson in regard to blood analysis. It is the only way in which we will ever be able to recognize these various forms of anaemia. A great many of us, perhaps, are not qualified for that work, but the time is coming when that shall be part of the physician's work, as we consider now urinalysis to be a part of the physician's work. I also agree with Dr. Walter that we every day emulate nature's ways.

SANITARY REGULATIONS IN CHILD LIFE

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CHICAGO

You may question, wherein is sanitary regulation in child life distinct from general sanitation? The keynote of Pediatrics is development. Sanitation must recognize whatever arrests or assists normal development.

There are important facts in the hygiene of childhood dependent upon the anatomy and physiology of early life. The open petrous-mastoid-squamous suture of the first year gives a greater liability to fatal extension of otitis. Therefore, emphatically, children under four should be guarded against exposure to the infectious fevers. The periods of ossification and their significance in rachitis is intimately associated with the delicate adjustment of food to the imperfectly developed digestive tract. The small larynx in croup, the great activity of all lymphoid tissue, the liability to contagious disease, the rapid development and hence the instability of the nerve centres, each suggests directly its importance in child development.

There are lessons to be learned from the gross pathological lesions and the study thereof by the specialist. The full nutritive feeding and out-of-door life in tuberculosis, the proteids and fruit juice in scurvy, rest and fresh air in rheumatism, an even temperature of self-control in chorea, each reiterates important measures in preventive medicine —which is hygiene.

For brevity sake, this paper is limited to fundamental sanitary regulations in the home life and in the contagious diseases common to childhood. The cases cited and conclusions drawn are from private practice and experience in a children's hospital. Sunshine and air space as a first requisite is trite but important. The conventional good housekeeping, which demands the morning hours for indoor work before the nurse or mother is free to take the children out, the fashion in apartment architecture which claims the sunniest, largest room for the parlor and relegates the sleeping room to the dark places, the fear of a little fresh air and the limited door-yard space of our cities, all militate against abundant sunshine and air-space for the growing child. In ordinary temperature, a child up to seven years should be at play out of doors from four to six hours daily. This leaves time for the mid-day nap so essential to the equipoise of the nervous system. With convalescent children I have found the most common danger signals to be winds of great velocity, the air from melting snow, and the sharp

chill which comes in mid-afternoon in winter. Improvised sun rooms, city roofs and porches are all excellent accessories, but nothing equals a bit of earth and sand pile. Babies may be taken out on a mild day after the first full bath. School children under twelve, housed for five hours a day need the rest of daylight for out-door play, in protected yards, if they may be, in the streets and gutters, if that is the only alternative. The plan of the vacation school extended to the regular school year is going to solve the problem of school hours and play time.

Of equal importance is the air space at night. We all assent to the rule of 1,000 cubic feet to a person, with a constant change of air; how often do we inspect our patient's room and know that a child is not crowded into a small room with an adult, or whether the windows are adequately opened. In well-regulated households of more than ordinary intelligence, I find the windows close shut during the night and nap-time for six months of the year. The room is ventilated from an open hall window; the excuse is that the room is small and an open window allows a "draught of night air across the bed." Fresh night air is preferable to stale air, and an improvised screen will avert direct draughts. Let the child sleep in cap and mittens, if need be. Why is camping so wholesome if fresh air, or even a little dampness, is to be feared?

The normal child under two has a daily bath and oil rub. By actual test, I find this bath frequently too warm; it should be as cool as the child will bear without shrinking. There is no absolute standard of temperature. After two years, this bath may be given the first thing in the morning and followed directly by a cup of warm milk. If the full bath is impracticable, the dash of cool water over the chest before and behind with a brisk rub has cured many a child of tendency to catching cold on slight occasion. In institutional work the wards are frequently crowded to the extent of 600 cubic feet to a bed. Whenever an epidemic has subsided so as to increase the air space per capita, the result is directly evident. An instance of this during the past spring is fresh in my mind. A ward containing ten cases of whooping cough was reduced to four; another of eight measles reduced to five; another of three measles to one. Within two or three days, there was marked improvement in the rate of convalescence, and in freedom from the minor ailments which had hitherto characterized the progress of the cases. This experience has been repeated so often that the conclusion is beyond question.

It is a fundamental rule of body development that no function should continue prominently in the field of consciousness for a long

time. A child at play for three or four consecutive hours has done a half day's work and needs the mid-day nap. The night's sleep should be adequate to recuperate the expenditure of the day. It may be nine hours, it may be twelve. A healthy child should not be wakened, neither should he be left to loll in bed after wakening.

Increase of weight and height are indicative of the degree of cell activity; regular measurement should be a matter of routine. It is well to remember that frequently, increase of height marks a stationary period in weight. Daily observation of the stools gives the record of digestion, the urine tells the story of tissue repair, the character and amount of sleep, the condition of the central nervous system. A healthy neuron is the basis of a healthy body. Any hygienic measure which conserves the vitality and normal development of this unit of the nervous system is wholesale and desirable. The physiological fact of slow regeneration of nerve tissue is significant. If the integrity of the nervous system is once impaired, there must be long and patient waiting for its renewal. The earliest departure from health should be noted and the cause removed.

The second topic to be presented is sanitation in acute infectious disease. These conclusions are chiefly drawn from hospital experience in successive epidemics. In three years' service at the Chicago Home for the Friendless, with an annual reception of about a thousand children and treatment of about four hundred in the Infirmary for mild and severe illness, the first year's death roll was four; the second year, five; the third year, one. Already in the fourth year we have had our first malignant epidemic, diphtheria and measles, with sewer gas complication. The mortality was high. Eighty-nine cases and ten deaths; uncomplicated diphtheria, plain measles, diphtheria and measles, measles and pneumonia, diphtheria complicated with measles and pneumonia. The deaths were all in children under six, and for the most part cases of diphtheria complicated with measles. The epidemic began in January and lasted into April. The first two cases of diphtheria developed in children recently entered, and a succession of cases followed among the children of three departments, all quartered in one wing of the building. All of the plumbing in these three departments had common waste pipes. Two cases were fulminating. One of laryngeal type discovered with fever in the morning died at midnight. Another with pneumonia and suppressed measles died on the seventh day. One recovered from diphtheria with an impaired heart to die from measles in the twelfth week. One recovered from a severe outbreak of inherited syphilis to die of measles and pneumonia. About the eighth week of the epidemic followed a period of extreme cold

weather; odors as of stale vegetables were detected in two nursery departments. When all possible accusation of uncleanliness was refuted, the plumber was called, with the findings of an unused and unflushed closet on an upper floor, cracks in the waste pipes from settling of the building, and a partial closing of one of the waste pipes by foreign matter. Further, the plumber reported the possibility in severe weather of a thin coating of ice over the top of the soil pipe, cutting off ventilation. This, combined with the suction of automatic flushing and impaired plumbing, made the entrance of sewer gas an inevitable but deplorable consequence. With the repair of these pipes, the virulence subsided, and at the end of three months, the epidemic ceased. No case of diphtheria and only light cases of measles occurred in the other wing of the building.

A word in regard to the transmission of contagion by nurse or physician. The sleeping rooms of the nurses were on the same floor as the diphtheria cases, with a common hall. Therefore, the isolation was imperfect. Nevertheless, no case of diphtheria occurred, except in children who had been exposed in the same ward to some other case. We were not so successful in confining measles to an upper floor. In spite of our precautions measles broke out in the convalescent ward. During the entire hospital service, I have been in daily contact with other children, and especially with children from one to three in my own household, without carrying to them the contagion. The mode of procedure was simple. Nurse and doctor had caps and gowns for each floor. Soap and warm water, bichloride solution and fresh air did the rest. At the height of the malignancy of the epidemic the nurses, housekeeper and laundress all suffered from some degree of tonsillitis. All received protective doses of antitoxin. With this aid and increased nutrition, they carried their work to a finish.

The board of managers have taken cognizance of the defective arrangement of rooms, and since the epidemic have provided nurses' quarters apart from the wards. This has increased the number of small rooms to be used for isolating suspected and complicated cases.

To illustrate the possibility of more perfect isolation, the following cases are quoted from private practice: A child of three was discovered with fully developed follicular tonsillitis. He was isolated in an upper room; a younger child of two was kept in the rooms below. On the third day of tonsillitis, measles developed and ran a regular mild course. The two-year-old escaped both tonsillitis and measles. In a flat, an eight-year-old boy had scarlet fever; he was quarantined promptly and for six weeks. A baby of three escaped. In a third family a boy of fourteen was sent home from school with a fever.

In the temporary absence of the mother, he lay on a couch for three hours, playing with a baby of two years. When the mother returned, she quarantined the boy. A typical severe case of scarlet fever developed. The mother nursed the boy and superintended the household with no further outbreak. In each case antiseptic precautions were precisely maintained, verifying the conclusion that isolation and asepsis reduce to a minimum the transmission of contagion. The best antiseptics are unstinted soap and water, fresh air, a full stomach and plenty of sleep. Without doubt the person slightly ill with a contagious disease, and taking no hygienic precaution is the great disseminator of contagion.

In conclusion, the following hygienic rules stand fast:

An abundant supply of sunshine, air-space, food and sleep.

No long continued taxing of bodily function.

A moral atmosphere of self-control.

Close inspection of the first departure from health and a speedy removal of the cause.

Careful isolation in mild or severe infection.

An active, full resisting power, the best preventive of disease.

ANEMIA IN CHILD LIFE

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Before considering abnormal states of the blood let us glance briefly at the normal composition and function of the blood, and its relation to the organism. When we consider that the blood is the great carrier of nutritive substances; that it transports to the tissues the oxygen taken on in the lungs; and that it also carries from the tissues the waste material and debris resulting from the process of metabolism, we get some idea of its supreme importance. When we further consider that this great carrier is itself one of the tissues of the body; being made up of cells and intercellular substance, varying in composition, but especially adapted for circulation through the minutest capillaries we see what an important place it holds in the economy. In the blood plasma nature has provided a liquid capable of holding in solution, not only such of the inorganic salts as are required by the body, but also the nutritive products of both proteid and carbohydrate food stuffs, and of so modifying them as to render them available either as fuel or building material. It is the red corpuscle that is the principal oxygen carrier. The latest researches have shown that the red cells consist of but two substances, delicate colorless stroma and hæmoglobin. Hæmoglobin possesses the property when brought into the presence of oxygen of forming with it a loose combination known as hæmachromogen, which in turn possesses the property of giving up the oxygen of its molecule for the oxidation of the tissues. For many years the white cell or leucocyte has been the blood element of which little was known, either as to its function or clinical significance; and we are just beginning to understand its importance. The normal number of red cells in the adult is 4,500,000 to 5,000,000 per cubic millimeter, varying with the sex, the time of the day, the state of the nutrition, etc. The white cells vary from 7,500 to 10,000, the average proportion between the two being 1 to 700. At birth the blood is very rich in red cells and hæmoglobin, but during the first few days of extrauterine life the proportion rapidly falls; and during the entire period of childhood there is a condition of relative anemia. The red cells, moreover, vary much in size and shape, and the presence of normablasts does not have as much significance as in the adult. The white cells are relatively increased and a condition of leucocytosis is physiological. It is to this condition that the difficulty in classifying the anemias of childhood is due. Perhaps the best classification is

that made by Monti and Berggrun. They place in one category the secondary anemias, which are classified as mild and grave; with a subclass depending on the presence or absence of leucocytosis. These are further sub-divided according to their aetiology as congenital; due to syphilis, tuberculosis, malaria, etc., of the mother during pregnancy, and acquired, due to hemorrhages, malnutrition, the infectious fevers bad hygiene, constitutional diseases, etc. According to this classification pernicious anemia, leukæmia, and anemia infantum pseudoleukæmia are placed in a class by themselves. The blood changes in infantile anemias are very marked, especially in the number of nucleated red cells; many of which present dividing nuclei. The excessively large number of leucocytes consists of a majority of lymphocytes with a number of myelocytes. An enlarged spleen is not uncommon in many of the severe secondary anemias and thus is of little assistance in the diagnosis. Cabot is inclined to place the cases classed as anemia infantum pseudoleukæmia as intermediate between the primary and secondary anemias; some of the most severe forms of the disease being observed to follow amoebic diarrhoea. The difficulty seems to lie in the fact that the blood in early childhood is apt to revert to the foetal type from slight lesions, which in the adult would only be followed by a transient leucocytosis. Fortunately the more severe of the primary anemias are comparatively rare and it is only with the secondary type that we have much to do as physicians. It is not my purpose to discuss the medicinal treatment, but as briefly as possible outline some of the hygienic and preventive methods that may be of value.

Much has been said and written as to the right of a child to be well born and every year more intelligent care is being given to the pregnant woman. While it may not be possible to antedate conception in our treatment, let us give conscientious attention to each case coming under our care during gestation, advising the best hygienic surroundings and treating all diseased conditions. Fresh air, cheerful society, wholesome food, healthful exercise are more essential then than at any other period of a woman's life. After the child is born proper feeding is the first great essential. Statistics show that the higher the state of civilization the less are its women fitted for the functions of motherhood; so that only about 7 per cent. of the children born to the upper classes can be breast fed; many infants ostensibly breast fed are only getting a filtrate and that of a very poor quality. The mother who can only keep up the flow of milk by ingesting large quantities of liquids will present a food deficient in many of the most important constituents. In a recent lecture on the chemistry of breast milk, the lecturer said that after comparing several analysis he had decided that a

beneficent providence must look after the children and adjust their stomachs to their food, as nothing short of a miracle could explain how some children lived and even seemed to thrive on a food so deficient in nutritive qualities as some of the samples of breast milk tested. Appreciating the difficulties surrounding this problem, of a proper food the scientific (?) chemist has rushed to the rescue with a number of substitutes, each warranted to be the one thing long sought, but notwithstanding the convincing tables, and glowing testimonials, the infants nourished on these foods continue to swell the army of the anemic. But I am not writing on infant feeding except as it merits our consideration as one of the predisposing factors to the disease we are studying; but would say that I have found many of these cases benefited by the same diet that would be useful in scorbutus and rachitis; viz., fruit juices, especially orange juice, and modified fresh cow's milk. The latest authorities unite in condemning sterilized milk as an article of diet, yet in our large cities the question of obtaining cow's milk in such a condition as would admit of its use without sterilization is a serious problem. Second only to feeding comes the importance of air and sunshine. It has been found in the anemias of adult life that patients kept out of doors as much as possible made the most rapid recoveries, and the same fact holds good in children. We would laugh at the gardener who attempted to raise fruit or flowers in a cellar. yet some parents seem to expect the babies to be robust and rosy-cheeked with only airings, keeping them for the most part in the more or less vitiated air of the home, with the sun carefully excluded by shades and hangings. Hasten the day when every modern house shall have a sun-parlor and a hospital room included in the architectural design. But until then give the babies the sunniest room in the house, and keep them out of doors whenever the weather is suitable. Cleanliness is another important hygienic condition, and especially cleanliness as related to the food supply. The summer diarrhoeas which are such a prolific cause of secondary anemia are now known to be bacterial in origin, the bacillus often finding entrance to the alimentary canal by means of dirty nursing bottles and nipples. I am glad that some boards of health are waging war on the unsanitary nursing bottle of the rubber tube type and making it an offense for druggists to carry them in stock. It is a question in some cases as to whether bathing may not be carried to excess in delicate infants, but in the larger number of cases the tepid bath given quickly and followed by brisk friction results in stimulation to the hæmopoietic as well as the other functions. In the primary anemias we are as yet in the dark both as to the aetiology and the best methods of treatment. Many of these cases come on insid-

uously and progress to a fatal termination, notwithstanding all the resources of modern medicine. But while deploring our ignorance along that line, let us combat the secondary anemias along the lines indicated; using pure, fresh food, fresh air, and sunshine; supplemented by the indicated remedy, and many of these little ones may be won back to health.

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BUREAU OF SANITARY SCIENCE AND PUBLIC HEALTH

TWENTIETH CENTURY SANITATION

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Twentieth Century Sanitation is the subject to which I ask your attention this morning.

In this age of startling achievements and remarkable discoveries medical science holds a distinguished position. In its various branches surgery has achieved its greatest triumphs, pathology has made decided progress, materia medica has exerted a peculiar reconstructive influence, while sanitation and care for the public health has received a tremendous impetus and has become a controlling element in if not the basis of modern life.

Questions arise every day which demand our attention, not only as physicians and sanitarians, but as public-spirited citizens. Physicians more than most men come in closer contact with the need of sanitary reforms, and it becomes our duty to see that proper laws are passed by our legislatures, and, further, to see to it—and this is quite as important—that they are intelligently enforced. We are bound to protect the public, who look to us for honest, scientific, continuous effort toward the improvement of the public health. We meet with opposition on many sides, city and town officials overrule our carefully studied and necessary recommendations for sanitary reform; either through ignorance or interested motives legislators fail to enact the laws which public health demands, and the struggle goes on against great odds. Yet we must stand for the right until a day will come when our labors will be rewarded and the public health improved, our obligations to the city, state—yes, nation—fulfilled. Today we are equipped with the knowledge and skill which has been acquired during the last quarter century, and we must go forward in our day with the spirit of investigation which has given us the knowledge which we now possess. Human existence is surrounded by so many unfavorable conditions that whichever way we turn the dread enemy, disease, is awaiting a favorable opportunity to attack. The air we breathe, so

essential to life, is laden with pathogenic germs; the elements that supply nutrition are carriers of disease. Our efforts are not limited to preventing the extension of disease in the homes of our trusting patients, but include the protection of the whole community in which we move, the state in which we hold a legal right to practice, the nation of which we are justly proud. We have but to review the greatly reduced mortality rates in civilized countries generally to appreciate the beneficent results of enforced sanitation. These results have followed our knowledge of how to combat certain maladies and how to prevent widespread epidemics, which formerly claimed their tens of thousands.

The plague is no longer known in Europe.

Typhus fever has been greatly eliminated.

Smallpox, in countries where vaccination is enforced, is more a sporadic than epidemic disease.

Cholera is much less prevalent and was entirely excluded from the United States during the last two epidemics in Europe.

Yellow fever is now well within our control.

Malarial fever should no longer be an enigma.

Typhoid still claims many victims, notwithstanding our knowledge of its cause and means of its extermination.

Tuberculosis also swells our mortality tables; here, again, we know its source and how best to combat it.

Diphtheria is another malady which demands keener recognition and more prompt isolation.

There can be no better demonstration of the need of preventive measures than the fact that no less than 35,379 deaths from typhoid fever and 110,000 from tuberculosis were recorded in the year 1900 by the United States census.

With our present resources in what direction should our energies be exerted?

We must solve the problem of river-pollution in its various phases, especially as to sewage disposal and the provision for pure water supplies.

We must more successfully combat the persistent appearance of typhoid fever.

We must insist upon the extermination of insects, which are the means of transmitting infectious diseases.

Tuberculosis, "the white plague," must be treated as modern research demands.

We must practice absolute isolation and disinfection in connection with contagious and infectious diseases in general, and with diphtheria and scarlet fever in particular.

We must continue to investigate disinfecting agents and master their most efficient means of application.

We must insist upon continued advance in the purification of air for ventilating purposes, physically, chemically and bacterially alike.

Legislators must be educated to appreciate the importance of preventive medicine and the necessity of the application of preventive measures.

Climate, dress, exercise, dietetics, disposal of the dead and kindred subjects strictly come within the scope of this paper. However, they will simply be noted in passing as topics of great interest and deserving of further development, though hardly of an imperative nature. Of the topics just enumerated only those will be considered which have appealed to the writer as of particular importance.

RIVER-POLLUTION AND WATER SUPPLIES

Fifty years ago water was first recognized as a vehicle of infectious disease, while our scientific purification of water dates back only to 1886. Our advance in the direction of this most vital engineering and sanitary reform has resulted from the persistent, ever-progressive spirit that prompts investigation. In the laboratories of this state, under the direction and supervision of such men as Drown and Sedgwick, new and original methods of research and analysis of drinking water were developed. The unqualified excellence of these methods is exemplified in that today they are universally adopted as the best outlines for this branch of water sanitation. Rivers and other sources of water supply, when contaminated, are natural vehicles for distributing poisonous metallic salts, and the germs of infectious disease.

The action of free carbonic acid on lead pipes has caused many an epidemic of lead poisoning, one of the most recent being the experience of Lowell, Mass., where a public supply rich in free carbonic acid proved to be a dangerous solvent of lead. Professor Drown's discovery of the action of spring water containing free carbonic acid upon brass piping is of importance in this connection and should always be borne in mind when considering the action of water upon metallic pipes. It is a well-known fact that the solvent action of rain water on lead pipes is greater than the ordinary well water.

Water courses which are depended upon for domestic purposes should not be exposed to the pollution resulting from manufacturing industries. The time-honored theory of the self-purification of streams

is true in so far as it is affected by dilution and by displacement of dissolved gases. But for the direct oxidation of organic matter or the destruction of many living bacteria it has been shown to be erroneous. Professor Sedgwick (1) says that "it would be more correct to say that quiet water purifies itself, since under these conditions microbes tend eventually to disappear, either dying from old age or inanition or settling to the bottom and being there detained."

The primitive disposal of sewage by allowing free drainage into streams has been tolerated at the expense of thousands of lives. The increase of population and growth of towns and cities makes it impossible longer to neglect a danger that is increasing rapidly. The disposal of sewage is consequently a matter of the first importance. Some of our large cities have been more or less successful in disposing of their sewage, but the time has come when every town of importance must deal with this question in a thorough and scientific manner. It is equally important that the refuse from certain manufacturing and industrial establishments, whether or *not* it shall have become an ingredient of the sewage of any city, should not be allowed free drainage into streams. The State Legislature alone can deal effectively with many of these questions, restraining towns from disregarding the rights of other towns on the same stream.

I have drawn freely from Professor Sedgwick's "Principles of Sanitary Science and the Public Health" (2) in the consideration of sewage disposal. Sewage disposal became such a problem in this state that in 1886 a statute entitled "An Act to Protect the Purity of Inland Waters" was approved, and has without question been the most satisfactory enactment for the benefit of the public health undertaken in America. The special functions of the State Board of Health as presented in this statute concisely stated by Professor Sedgwick are as follows:

1—To have the general care and oversight of all the inland waters of the commonwealth.

2—To recommend legislation and suitable plans for systems of main sewers for the state.

3—To cause examinations of the waters of ponds and streams to be made.

4—To recommend measures to prevent the pollution of waters.

5—To conduct experiments on the purification of drainage.

6—To conduct experiments on the disposal of manufacturing refuse.

7—To consult with and advise the authorities of cities and towns, or with others, with reference to water supply and drainage.

8—To consult with and advise manufacturers with reference to the disposal of manufacturing refuse.

9—To bring to the notice of the Attorney General all omissions to comply with existing laws.

The act further provides that authorities of cities and towns, and all others intending to introduce systems of water supply or sewerage shall submit to the Board outlines of their proposed plans or schemes in relation to these subjects, and that manufacturers intending to engage in any business, drainage or refuse from which may tend to cause the pollution of any inland waters, shall also give notice to the Board of their intentions.

This extension of the powers of the Board of Health resulted in elaborate experimentation, which has formed the basis of methods of sewage disposal and purification of streams that are now quite universally adopted. For large cities, intermittent filtration has stood the test of time where other methods have failed. From the sanitarian's standpoint it is of the greatest importance to know what becomes of the infectious material in sewage when subjected to filtration. One of the most surprising phenomena which takes place in the treatment of sewage by filtration is the remarkable disappearance of millions of living bacteria present in the crude sewage. While some are undoubtedly mechanically detained in the jelly like masses covering the filter bed, others die in the lower layers of the filter from want of food, where they are bathed in the now purified effluent which before purification contained the material necessary for their existence. It is on the upper layer of the filter that a high degree of nitrification is accomplished by a marked disappearance of bacteria. Repeated experiments have shown that the effluent from a well constructed filter is incapable of supporting any considerable number of bacteria, and consequently is practically innocuous. It is not claimed that sewage effluent is desirable for drinking purposes, but there is little doubt that this effluent may be discharged with safety into streams or other water supplies. The putrefactive and infectious bacteria held back in the filter are virtually destroyed. The average sewage applied to filter beds contains no less than one million bacteria to the cubic centimetre, whereas the effluent contains at most only hundreds. Strangely enough, however, the nitrifying organisms which play the all-important part in this treatment of sewage are not destroyed by this process, but remain to act upon fresh supplies of sewage.

A recent development in the theory and practice of sewage disposal and purification is known as the "septic process." This process consists in simply allowing sewage to stagnate, ferment and putrefy in

a tank. Under these conditions the sewage contains no free oxygen and the organic matter is thus more thoroughly decomposed and the sewage is more readily nitrified. It is afterwards run through slow sand filters in the usual methods of intermittent filtration, or by the ingenious modification of intermittent filtration known as "contact filters" proposed by Dibdin (3).

These methods, of course, involve large initial outlay, but once in operation they can be extended indefinitely and maintained at a reasonable expense. Those who have given the subject attention realize what the mass of people do not, how the sources of impurity on a distant water shed may materially affect the character of the water which flows into the streams that feed the rivers and reservoirs from which the drinking water of a city is derived. There is no better example of provision in advance for future requirement, by a well-considered and elaborate system, than the Metropolitan supply for Boston and the twenty-eight cities and towns in its immediate vicinity. In preparing the large Wachusett reservoir, one of the reservoirs of this system, all organic matter of every description has been removed down to the clean gravel that there may be nothing to support microscopical organic life during storage. Similar care has been shown in the other reservoirs and the brooks and streams that supply them. Without going into detail, the aim has been, in a word:

"1st—To secure water originally of a high organic purity.

"2nd—To keep the water-sheds as uninhabited as possible.

"3rd—To purify the water collected by long storage in an immense reservoir.

"4th—To conserve its purity when this has once been established by having the reservoir at the start as free as possible from organic matter which might support bacteria or microscopical organisms."

In this connection the U. S. Government is carrying on a most important investigation of the purity and impurity of all the rivers of the country from the mercantile as well as the sanitary point of view, and great results may be expected from this investigation. Mr. Leighton (4) as an expert has charge of this work. His methods are novel and original. With compressed tablets of different chemical composition, which he carries with him in his boat as he floats down the stream, he is able to make on the spot most of the tests required to determine the degree of purity of the water and record his results. He expects ere long by perfecting this method, to be able to make all the required tests en route and thus to reduce to a minimum the time, expense and necessary equipment to obtain his results.

With adequate disinfection of typhoid excreta before their ejection into the sewers, *with* well regulated intermittent filtration, the effluent alone being allowed to enter the rivers, *with* protection of the watersheds and tributaries from contamination, *with* the mechanical filtration of all river waters used for drinking purposes, *with* these and these alone can we hope to wage successful warfare against one great cause of infectious diseases. The public is beginning to appreciate the expediency of such measures, and now is the time for us to use our influence toward this most successful sanitary reform.

TYPHOID FEVER

Notwithstanding our knowledge of the cause of typhoid fever and the means of extermination of the typhoid bacillus we are amazed at the tremendous death rate from this disease, not only in civil life, but especially in connection with the camp and field operations during recent wars. With due allowance for what has been said of infection through drinking water, there is no reason to believe that in the experiences of army life this may not be the most fertile source of infection. If the orders that all drinking water should be boiled have been obeyed, we must look elsewhere for evidences of infection.

In the South African war, C. Childs (5), who made an exhaustive report as Chairman of the Commission, is convinced that a great part of the sickness and death from enteric fever during that war was assignable to other causes than contamination of the water supply, and that it could have been in a great measure prevented by a more rigid enforcement of sanitary measures in the camps and hospitals.

The conditions of military, as compared with civil life, present special advantages and opportunities for tracing out the source and paths of invasion by enteric fever.

Again, the study of typhoid outbreaks in military expeditions is all the more instructive, since up to the present time all wars have been carried on under conditions highly favorable to the development of these epidemics. When you consider that millions of the bacilli may be found in a few drops of the urine of a typhoid patient, the difficulty of preventing the infecting of the soil round about the tents is apparent. This infected soil is brought into the tent as dust, is mingled with the clothing, bedding and food of the inmates of the tent and an epidemic is generated.

The Commission draws the following conclusions:

"1—At the time when the Commission began investigation, only about one-half the cases of enteric fever were correctly diagnosed, the other half being returned as malaria, simple continued fever, diarrhea, etc.

"2—The epidemics were due in large measure to the difficulty of dealing with the excreta and to the widespread pollution of the soil.

"3—Infected water was not an important factor in the spread of enteric fever, as the epidemic continued with the change of water supplies.

"4—Personal contact was a very important factor in the spread of the disease.

"Out of 1,608 cases more than one-half were due to direct or indirect infection in and around the tents. The evidence indicates that when once the infection has been established in a camp, it will continue to spread in spite of shifting camp, provision of pure water and other improvements, unless the infected men be separated, and the contaminated clothing, bedding and tentage thoroughly disinfected."

The foregoing clearly demonstrates the necessity of a carefully constructed camp, with explicit instructions to the soldiers of the importance of rigid sanitary camp habits.

The experience of England and the United States in their recent wars should stimulate army surgeons to anticipate future repetition of such contingencies. Physicians should instruct nurses and households, where typhoid fever exists, so definitely and impressively that every possible disinfecting precaution will be taken to prevent the extension of the disease. Boards of Health must be more exacting in the supervision of water supplies. Epidemics must be ferreted out with all possible dispatch and suspects kept under careful sanitary control. The physician must be more exact in his diagnosis and under no circumstances himself neglect to see that all essential steps are taken to stamp out the disease. The protection of food supplies from flies, ants, and other insects, which may contaminate these supplies, is of the most importance. The Public must be educated to the point of fully appreciating the gravity of any lapses from definite sanitary laws affecting this disease. Not until each and every one of these requirements is fully understood and obeyed can we hope to make typhoid fever as rare a disease as is the Plague in Europe and the Yellow Fever to-day in Havana.

YELLOW FEVER AND ITS PREVENTION

Most remarkable achievements have been reached in the yellow fever sections through the excellent work of the American Army Commission of which Major Walter Reed (6), Surgeon, was the head. The results of this investigation have shown conclusively that the stringent quarantine regulations against vessels and cargoes from yellow fever ports have been unnecessary, and this great incubus on

commerce has been removed, so that to-day all civilized nations are rejoicing in the final discovery of the cause of yellow fever and the means of exterminating it. The Commission appointed in May, 1900, began work in June by establishing laboratories near Quemados, Cuba, and in the city of Havana. Yellow fever was prevailing at the time, and an opportunity was thus offered for immediate study.

Up to this time various causes for yellow fever had been assigned. Some investigators announced that the bacillus icteriodes, sometimes found in the blood of yellow fever subjects, was the real cause of the disease; others maintained that transmission from man to man was by fomites. These theories were soon shown by the Commission's investigators to be erroneous. To quote from the report: "They found that the specific agent of yellow fever is in the blood, at least during the first, second, and third days of the attack." Also, that "the blood which conveyed the disease did not contain any bacterium which could grow on our usual laboratory media."

Again, "yellow fever can be produced by the injection of a small quantity of bacteria-free serum filtrate, obtained by passing the diluted serum through a Berkefeld laboratory filter, and, further, that the blood of a case of yellow fever, thus produced, when injected into a third non-immune subject will promptly bring about an attack of this disease; thus demonstrating that the specific agent of yellow fever can find its way through the pores of a filter which ordinarily serves to prevent the passage of all known bacteria.

"These experiments appear to indicate that yellow fever, like the foot and mouth disease of cattle, is caused by a micro-organism so minute in size that it might be designated as ultra-microscopic."

Painstaking and elaborate experiments determined two most important points: First, that yellow fever is not conveyed by fomites. Second, that, like malaria, it is transmitted by the bite of a species of mosquito, which in this instance is the Stegomyia fasciata. It is interesting to note in this connection that twelve days must elapse from the time the mosquito is contaminated, by sucking blood from a yellow fever patient, before it is capable of transmitting the disease, since bites resulting from such recently infected mosquitos are not effectual in inoculation, until the elaboration of the yellow fever poison in the body of the mosquito. The prevention of yellow fever can, therefore, only be positively accomplished by the destruction of infected mosquitos and by the perfect isolation of the patients in order that the mosquito cannot get access to them and thus absorb the poison.

The general measures adopted by the Havana Board of Health include the immediate quarantine of every patient suffering from yel-

low fever, the prompt protection by wire screens of the room in which he remains, and the destruction of all the mosquitos in the house and neighboring houses. This is accomplished by the fumes of pyrethrum, which are used to stupefy the insects, which are then swept together and burned. These measures were so rigidly enforced in Havana that within ninety days after their enforcement there was not a case of yellow fever in the city, and this condition of things was maintained for fifty-four days. Numerous cases, however, were introduced from neighboring towns as time went on, which were immediately taken in hand, and under the same regime the spread of the disease was prevented.

As further evidence of this remarkable sanitary achievement it should be noted that for 150 years up to and including 1901, yellow fever has made its annual appearance in Havana, and, if I am correctly informed, since September, 1901, not a single case has been reported on the island of Cuba. To further illustrate the magnitude of the results obtained by these investigations let us consider the following figures. The average monthly mortality from yellow fever in Havana for the twenty years, 1880-1899, inclusive, was as follows:

	1880-1899.	1900.	1901.
June	57	8	0
July	89	30	1
August	90	49	2
September	62	52	2
October	50	74	0
November	36	54	0

As noted in the case of yellow fever, the mosquito causing malaria, anopheles, must itself become inoculated by sucking the blood of a malarial subject, that the parasites undergo an important part of their development within the body of the mosquito, and that they are conveyed to non-immunes, bitten by the mosquito, with the salivary poison injected during the bite.

These results on the etiology of yellow fever and malaria have added a most brilliant chapter in the history of Sanitary Science.

The fresh air treatment of Tuberculosis speaks for itself. Our only hope in exterminating the "white plague," as it is often termed, depends upon enforcing the use of the "spit-cups," recommending "tent life," and restricting marriages.

The proper quarantine of Diphtheria and Scarlet Fever patients with early recognition of these diseases are the essential steps toward their extermination. It rests with the physician more than any other

man to determine the progress or decline of these two malignant diseases, and he must prove himself master of the situation.

With the disinfecting agents at our command to-day, we should be much more successful in limiting these diseases. However, it is gratifying to review the generally improved mortality tables resulting from their careful quarantine.

Every year we get a stronger hold upon the public, and the struggle for improved sanitary legislation and the enforcement of the same is not devoid of its victories. The practical and not the theoretical features of sanitary reform are forcing communities to appreciate what the medical profession is striving for and each year finds more willing ears and less opposition.

VENTILATION

Inventive genius coupled with sanitary laws have brought mechanical ventilation to its present perfection. In England and the United States workshop sanitation has been agitated for years and to-day the contrast between the dingy, damp, foul attic room where the "sweating system" developed and the well ventilated, sunny workshop is extreme.

The satisfactory mechanical ventilation of office buildings, theatres, churches, hotels and steamers has long since passed the experimental stage, and in the construction of buildings to-day a thorough knowledge of ventilation is no small part of the equipment of an architect. In factories not only is the fan and shaft system of paramount importance in maintaining a circulation of pure filtered air, but similar devices are used for the removal of metal filings, dust in wood shops, poisonous gases and other waste products of manufacturing which are injurious to the operatives. The successful adaptation of an elaborate ventilating plant in a hospital ship, is of such recent development and of such practical value and importance that I shall take it up in more or less detail.

The Boston Floating Hospital has a small steamer in commission, on which daily excursions are taken down the harbor for the benefit of sick babies and children. Returning at night, the babies and children are sent ashore and the steamer tied to her wharf. Certain critically ill babies are detained over night by the physicians that they may get the advantage of careful nursing and proper feeding. The air, however, along the wharves during many of the summer nights is sultry and dull, with consequent ill effects upon the little patients. The question of more perfect ventilation of the wards became a necessity, so that to-day this ship has been equipped with a system

of ventilating wards where the sickest babies are cared for, so perfect that any desired temperature may be procured and maintained indefinitely; also the degree of humidity of the air can be absolutely regulated. Prof. Woodbridge and S. F. Gardiner have devised this plant and developed it to its present perfected condition. It is the first application of the principles of refrigeration to regulating the quality of the air for hospital patients, the object being to modify existing conditions of temperature and percentage of moisture to bring them to a required standard. Generally speaking, a temperature of 74 degrees Fahrenheit with a humidity of 50 degrees is desired. A suction fan draws the air down a shaft extending from above the upper deck to a receiving chamber in the hold. This receiver is divided into two compartments, the one containing a series of coils that are connected with a brine tank, through which brine at a temperature of 10 degrees Fahrenheit circulates, the other holds a series of coils connected with an exhaust steam pipe. The air upon entering the receiver first passes over the brine coils and deposits a large percentage of moisture and is at the same time lowered in temperature. This air, which is now chilled and free from excessive humidity, next passes over the steam coils, is heated to any desired temperature and is then forced through specially constructed ducts into the different wards which are adapted for its use. The quantity of air circulated is about 2,000 cubic feet per minute, which for the wards in question averages something more than fifty cubic feet per patient per minute, an ample amount for the most critical cases. The ventilating ducts are arranged lengthwise through the centre of each ward and are placed just below the ceiling. As the outlet valves face upward the escaping air is deflected by the ceiling and more uniformly distributed, so as to temper the whole atmosphere and avoid objectionable drafts upon the patients. An attempt will be made this year to purify the air entering the shaft and also the air in the wards. The results of the improved ventilation were immediate, and many lives were saved that under previous conditions would have been undoubtedly lost.

SUMMARY

During the short time at my disposal I have endeavored to present some of the important divisions of public sanitation and have given some idea of the present stage of advancement in the several branches with suggestions as to what might be in store for the future.

At the head stands River pollution as a matter of the first importance. The entire community is vitally interested in provision for

healthy drinking water. We have seen what has already been done on a great scale in this state by the Metropolitan Water Board of Boston and vicinity in providing pure water for domestic use. A wise provision for the future has been made, worthy of imitation by others. The same measures are being undertaken, or will have to be undertaken in the near future, by all the great cities of this country and Europe. It may be that the great difficulty in some instances of providing an adequate water supply may limit the growth of certain cities. For instance, if greater London shall have in 1920 a population of over 8,000,000, as has been predicted, the question of adequate water supply assumes gigantic proportions. In a less degree the character, quality and abundance of a water supply may determine not only the population but the commercial importance of a city, in so far as its manufactures are dependent upon this supply.

Typhoid, as we all believe, is a strictly preventable disease and it is not to the credit of our several communities that it should still be allowed to number its victims by the thousands yearly, to say nothing of the far greater number whose illness incapacitates them for weeks, from pursuing their ordinary vocations. If every one in a community knew how this disease is propagated and realized by what simple means the germs of typhoid as well as allied diseases could be destroyed and faithfully observed the simple measures of destruction, we might hope that those diseases might absolutely disappear. A campaign of education might lead to such a desired result.

The yellow fever problem has been virtually solved. The cause of the disease, the mode of propagation, and the means of destruction have been unmistakably determined. It simply remains by eternal vigilance to take the simple precautions which we know will prove effective. The discovery of the method of propagation of yellow fever may be very far-reaching in its effects. The knowledge that a simple insect is alone responsible for transmitting the germs of disease, as yellow fever and malaria, makes it possible to render whole sections of country attractive which have been hitherto almost uninhabitable by the white race. The importance of this discovery to commerce is second only to that of human life.

Ventilation is capable of a far greater degree of perfection than any point yet reached. In the future it will not be considered sufficient simply to change the air of a theatre, public lecture hall, or hospital ward, but there will be a demand that the air supplied to such buildings or room shall be purified by filtration and by the removal of all noxious foreign ingredients which may impair its purity and by the regulation of the degree of moisture which the air should contain.

Cremation may be called a burning question, perhaps, but it has not yet become an imperative one and will not until the population in this country shall be far more dense than at present.

Sanitation is prevention, and the time is coming when a physician's chief function will be more in the prevention than in the curing of disease.

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MENTAL AND PSYCH

J. D. BUC
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The word Calisthenics means t
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All these terms and conditions
the body. Mental gymnastics, strength and beauty of the mind and of its productions, are common expressions.

So far we may go by common consent. The term "Psychic" is less common, and less understood. Literally, it has reference to the soul. With ordinary individuals, and by common consent, we shall meet with no protest and no difficulty. The expression "strength of soul," and "beauty of soul," are common. But with the schoolmen and the physio-psychologist the case is different. Here, objection is often made to the word psychic, altogether; or, it is made synonymous with mind, and then by considering mind as the kinetics of the physical brain materialism imagines itself triumphant.

The mental gymnastics by which such a result is accomplished is like those trades or handicrafts which exercise only a circumscribed area of muscle, and finally fix that area to automatic repetition of a few movements, resulting in deformity.

Both processes are time-serving and equally pervert evolution, strength, and beauty. In other words, they are uncalisthenic.

The philosophy of Delsarte, which either centers into, or altogether constitutes the modern science and art of Dramatic Expression, is based on the principle of general exercise and all-around development. It aims to get entirely rid of bias and restraint, and of all automatism, by "freeing the channels of expression" of the entire nature of man. It has breathing exercises, gymnastic exercises (both active and passive), and trains both the emotions and feelings before it comes to voice-culture at all. It is really the nearest approach to the science of Mental, Physical, and Psychical Calisthenics known to modern times. To represent all shades and varieties of the particular or the individual, man must apprehend and contact the general and the universal, and at the same time, free himself from all automatism or fixed form.

Cremation may b
not yet become a ychologist of to-day deals almost exclusively with
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Sanitatio s in terms of mass and motion, or matter and force. There
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of dise n, and a bar to progress.

Consciousness is a bug-a-boo to the nihilist. He invokes it when he must, and ignores it whenever he can, unmindful of the fact, that man lives in two worlds, the Physical and the Metaphysical; the world of things, and the world of ideas.

The largest and most patent fact in the life of man is the fact that he is conscious. The next fact in importance is, that man is a *thinker*. Thought and feeling are *functions*, not faculties of the brain and nervous mechanism. No one can even imagine how the brain or any form of matter can either think or feel. *I* think: *I* feel; and I am conscious; and this is as patent to the child as to the philosopher.

The true science of psychology, then, begins with the *fact* of consciousness and the Thinker, and concerns itself with facts, process, relations and laws. The thing-in-itself that we call "consciousness" we shall probably never know, except through its forms and conditions of manifestation.

On the metaphysical side of man's being, he is conscious, and he thinks and feels. On the Physical side he moves and acts. Here lie the world of Ideas, and the world of Things, in the conscious life of man. Man has thus a dual nature, and lives at once in two worlds. If now we analyze consciousness as it operates in man, we shall see that it has two distinct though related phases, corresponding to this double consciousness. These have been called "the conscious self," and the "subconscious self." The term "unconsciousness" as applied to man, under any conditions or circumstances, is a misnomer. To really annul or destroy man's consciousness for an instant, would be to annihilate him. Prof. William James of Harvard University, says, in his recently published "Gifford Lectures"— "The subconscious self is nowadays a well-accredited psychological entity." Its existence is an empirical fact demonstrated by modern research. Here, then, we have warrant for the terms, "conscious self," and "subconscious self." Consciousness being a common or generic term applied to the thinker or ego under two aspects, or groups of experiences. In the most ancient philosophy the terms used were the "Higher Self," and the "Lower Self," consciousness pertaining equally to both.

Now we may differentiate these two aspects of the self in man.

The conscious self functions through the brain and nervous mechanism, and feels, and senses the outer world of things, with "self" as separate from all others.

The subconscious self functions through the diffused protoplasm of the body (the vital center of every tissue cell), and perceives the inner world of being, the universal world of ideas, and laws, with self as a part of the whole.

The conscious mind, thinks, and feels. The subconscious mind, perceives, and knows.

Thought is to the conscious self, what intuition is to the subconscious self. Thought is indirect, while intuition is direct perception.

The real seat of memory is in the subconscious self. It never forgets anything, but keeps a perfect record of every detail of all experiences in the life of man.

By an act of attention and an impulse of the will the conscious self evokes from the underlying subconscious memory—record, events, associated ideas, or related experiences; and this only in part. It is thus that we re-member, or re-collect events.

The conscious self is the person, i. e., *personam* (mask).

The subconscious self is the real man, i. e., the Soul.

The subconscious self is subject to suggestion, and under psychic control, and may receive or give impressions to the subconscious self in others, independent of the waking thought or senses of the conscious self.

Consciousness, and conscience, are definitely related *aspects* of the Thinker. Consciousness may be said to be active in the conscious self, and so to relate man to passing events in the world of things, in sense and time.

Conscience is that passive contemplative phase of consciousness, that is ever in touch with the world of ideas, principles, and laws of Being. It is through this inward monitor, this "candle of the Lord," as Addison called it, that man discerns truth, beauty and goodness, proportion, harmony, love and all the sweet and tender sympathies of life. Music in its highest sense appeals to the subconscious self. Here in what Browning called "the background of being," one with the subconscious self, lies Conscience.

Consciousness in man and the outer self is concrete, and relates him to the outer forms of life.

Conscience to the inner or higher self, is abstract, and relates him to the universal world of Being.

The Conscious self is limited, and controlled by circumstances, and by environment.

If the subconscious self ever slept the springs of life would relax, and all the wheels run down.

"Thoughts are things," in the sense, that in the process of thinking we mould substance into form. These thought-forms may be pro-

jected through space, and by consonant vibration enter the thought substance of another person, and, he, being passive, may recognize concrete forms or ideas. This is *telepathy*.

Sensations, feelings, emotions, impulses, may in like manner and under like conditions, be projected into the subconscious self of another, and induce like conditions in him. This is the principle of *suggestion*. These two processes, Telepathy, and Suggestion, are closely related, but not identical. In either case, the sending instrument must be positive, and the receiving one passive or receptive.

The subconscious self in man may be thus seen to subtend and preserve the physical life of the body, on the one hand, and on the other to overshadow it with a life that is universal, and a light that is divine. Here also lies that vital force, that recuperative energy that restores men to health. It is the fountain of life and the source of joy.

As already shown, conscience and all our intuitions, and premonitions dwell in or emanates from this subconscious self. The warfare between good and evil, between selfishness and altruism, in the life of man concern the dominance of either the conscious self,—the *Mask* of the man, or the subconscious self, the Soul.

Strength and beauty of character in man as the result of living, necessarily concern and include his *whole* being. Limited or one-sided exercise invariably results in deformity. The vicious habit is fixed by the law of automatism, and this is equally true of the physical, mental, and psychical departments of man's being.

Motion is characteristic of the manifestation of every form and quality of life. We may therefore say that the different planes of life, as the physical, the sensuous, the intellectual, and the psychic, are characterized by different rates and ratios of vibration. These vibrations differ as to pitch, velocity, amplitude, quality, etc., etc.

We may also say, that there is in every individual at any time in his life, a *dominant chord*.

This dominant chord may be determined by the rule of the animal senses or appetite, or by his sensuous, or intellectual faculties.

Health means harmony, and harmony always implies a dominant chord, as the intervals in music, like the spaces in the solar spectrum, are fixed by nature, and not invented by man.

We have already seen that man's outer personal life is related to time, subject to disease and death, controlled by circumstance, and dominated by environment.

In the *natural* order, then, the dominant chord of man's life, and of his complex being lies in the subconscious or higher self. When-

ever it is here, man is in harmony with himself, and at one with nature. Here lies, in the broadest sense, the line of least resistance, the conditions of the largest life, and the most transcendent destiny.

The Thinker, and the actor, are one. The first problem, then, in the whole science of Calisthenics, is for the Thinker to control the thought, not by repression, but by cultivation.

Mind is the middle term between the lower and the higher self. It is, therefore, the real battle-ground in the life of man.

Suppose that a teacher of physical gymnastics spent two-thirds of his time in pointing out the defects, and criticizing the deformities of his pupils. Imagine the tears, the heartaches, and the discouragements that would ensue.

Does he not rather go to work directly with general exercises, definite movements, breathing and posture, to promote symmetry, strength and harmony of the whole individual, and find that deformities disappear of themselves?

Whenever the various elements of man's being are concordant with each other, and harmonious as a whole, they are, by the inherent nature of things, and by man's relations to nature, synchronous with universal being.

It is thus by following the lines of least resistance, according to the dominant chord, founded deep in the law of man's being, that resistance at last disappears altogether, strength and beauty are attained, and evolution completed.

We have all along busied ourselves with suppressing or punishing the evil tendencies of man or child, and forgetting to cultivate the good. When we know how to cultivate, promote, and secure physical health, we shall find no occupation in the cure of disease. So also in the mental and psychical realm of man's being, we shall cease to do evil, just in proportion as we learn to do good. The whole human race is hypnotized by the sins of commission, and seemingly unconscious regarding the sins of omission.

Now, fresh air puts man in touch with the vital magnetism of life. It cures more diseases than all other things we know.

Is there, then, a vital dynamic to the subconscious self in man, comparable to fresh, pure air to the physical body and conscious self? I answer unhesitatingly and unqualifiedly, that there is. Love is the vital dynamic; the elixir of life to the soul of man. Its expression is gentleness, kindness, and compassion. Not the mere absence of hatred, and the mildew and rot of indifference; but the gentle, persistent, active, habitual, and, at last, spontaneous and automatic exercise, of simple human kindness.

But, someone says this is so simple and sentimental a conclusion after the discussion of such abstruse principles. Thereby hangs the law, and analogies are complete throughout nature. The process of breathing, and the instinct for fresh air, are simple and universal, automatic, and instinctive in man, animals, and plants. Yet what physiologist has ever wholly explained all the conditions, and apprehended all the processes involved in respiration? We know that it is, that it is necessary, and that it is good.

Now reflect a moment. Did you ever know a human being so calloused or so depraved as not to be touched by a simple act of kindness? Do we not all appreciate it, hunger and thirst after it as for the air we breathe?

Man is the child of infinite life, intelligence and love, and his subconscious self adheres in this threefold source of his being, is ever in touch with it, immersed in it, upheld and glorified by it. Kindness and compassion are its very essence.

Therefore, the creator of man and of worlds has provided for man's subconscious life, health and happiness, just as by the fresh air of heaven He has provided for man's physical well-being.

Neither repression nor punishment arrest crime or reform the criminal. Wherever reformation has really taken place it will be found that a touch of human kindness has started a new vibration in the life of the criminal. Every such genuine reformation takes the criminal out of the maelstrom of crime, and so relieves society by just so much burden and danger. The same principles hold good in the simple misdemeanors of children. In place of repression and punishment of the bad, we have simply to unfold and encourage the good tendency and habit, and the law of human kindness is the key to the whole situation.

Remember, I am not dealing with sentiment in the least, but with the law. Neither am I here concerned with man's duty to his fellow-man, but, holding strictly to the law of self-preservation and self-development, though the inferences as to social statics lie upon the surface.

Bearing in mind, "the conscious self" (the person, or mask of the real man), and the "subconscious self," the real man; and bearing also in mind the principle of vibration, the principle of dominant chords, and of induction or suggestion, let us consider briefly the law of action. Newton's first law, that discerns action and reaction to be equal and opposite, is universal. It seems a hackneyed expression to say, we reap as we sow, or get what we give, or that it shall be done unto a man according to the deeds done in the body, but this is the

psychic and kinetic, no less than the ethical and moral law. If we send out thought-forms or thought vibrations of anger or lust, or greed, we thereby open an avenue in our own being through which the same evil and discordant vibrations will surely enter. The bounding ball will return with equal force under the law of equilibrium and the parallelogram of forces, and there is no power in the three worlds that can prevent its return, or change or defeat the law. I am not speaking of punishment or of other worlds, but of the basic law of man's being as it now is. Therefore we can see that any discordant or unhealthy vibration, any evil passion, disfigures the mask we call the personal self, and prevents the real man, the subconscious self, from manifesting at all.

Ease, harmony, health, and joy, lie on one side of the equation; disease, discord, and all unhappiness on the other. Complex as is the mechanism, and abstruse as may be the principles involved in this "Harp of a thousand strings" that we call man, the law of action is simple, and to be apprehended by a child. Furthermore, when it is not restrained or perverted it acts automatically, like breathing, or the law of gravitation. Through this law, despite all his self-will and perversity, man's life is maintained while he sleeps or wakes. The abuses and distortions to which it will submit before letting go, are almost an infinite Inferno. It sings the song of life, and touches the rhythm of health and harmony, in the midst of all our yells of hatred, or our wailings of self-pity and remorse.

The perfection of man's entire mechanism and its harmonious action is but the beginning, not the end, of his life on earth. When all this is perfected, says Browning:

> "When all mankind alike is perfected
> "Equal in full-blown powers, then, not till then,
> "I say, begins man's general infancy."

Most persons are as yet undeveloped, if not already deformed embryos.

Consciousness, like space, is universal. It sleeps in the rock; dreams in the plant; moves in the animal; and wakens in man.

The "subconscious self" in man is also, in its highest aspect, *supra-conscious*. As the conscious self in man relates and allies him to universal nature, on the physical plane of manifestation, so the subconscious self stands as the middle ground between two worlds, and the "supra-conscious self" relates him to universal spirit, on the divine plane, through the universal ether and the oversoul.

The organism of man thus compasses the cycle, and is in touch with the whole realm of Being. As Dryden puts it, "Nature's diapason closes full in man."

With telepathy on the one hand, and wireless telegraphy on the other, even the dullest materialist is beginning to apprehend the fact that man is the sounding board of Cosmos.

I am aware that there are herein a score of postulates that will bear elaboration, and that those to whom they appeal for the first time, might demand proof; and not one of all these theses would I wish to avoid. By science, by philosophy, by reason and analogy, by the direct perception of the average man, and by a concept of the "rational order that pervades the universe," do I believe these to be true and capable of proof.

Here, I think, lie the principles of mental and psychical calisthenics. Here are indicated and briefly outlined the laws, which, when recognized and applied, will promote the beauty and strength of the soul, precisely as physical gymnastics promote strength and symmetry to the physical body.

The Song of Life epitomized in man as the diapason of nature, is Love. Translated into action it is persistent, habitual, automatic, kindness, gentleness, and compassion. The song is sung every day, every hour, at the cradle of humanity. It is sung unceasingly by that divine energy that builds and upholds all Life.

The time must come, I think, when a knowledge of these psychic laws will be demanded of every teacher of children, of all superintendents of asylums or schools of refuge or reform, and at last, of all parents of children. It is, moreover, beginning to be understood, that even physical health and well-being depend very largely on a knowledge of and obedience to these psychic laws, that have regard to the whole man and his all-around development.

DISCUSSION

CHARLES GATCHELL, M.D.: In discussing the paper I shall give first attention to the essayist's final conclusion, and then take up his several postulates. This final conclusion, so beautifully expressed, is that "The song of life as epitomized in man as the diapason of nature, is love." This means that in the last analysis the power that moves the world is love, as expressed by that manifestation which we call kindness. Who is there that does not accept this conclusion? Who is there that will gainsay it? It seems that it has but to be stated in order to gain universal recognition.

But this is not a new presentation of the matter to you, for the reason that the essayist has already fortified himself against such comment where he says— "Someone says, this is so simple and sentimental a conclusion after the discussion of such abstruse principles," and then he goes on to make plain and logical his conclusions.

In this world there are but two things—matter and spirit. The fact is that matter is but the means to an end. We cannot separate ourselves from it, though we may and do control it. The essayist used the word "love." For that I will use the word "good," for we have the highest Biblical authority for it that the words are synonymous.

Now, in this world there are, and there always have been two contending forces—the forces of good and forces of evil. The ultimate purpose of all creation is the triumph of good over evil, and in the accomplishment of this man is the chosen instrument. Thus have we the mission of man, and the part he takes in the creative process. When the man dies, the influence of the work he has done still continues. The race lives, and his influence upon the race lives forever. Man dies, but his Soul is immortal. The forces for good are more powerful than the forces of evil, and they shall finally and completely triumph.

Love is expressed in its universal translation of kindness. I think it would be well to seek for some illustration which will make this clear to us. There is a famous American engineer who, in England, completed in nine months a piece of work that others said would require five years. In order to attain this result in such short time, he gathered a gigantic force of men about him, went at it, and completed the contract. He was asked how he accomplished this tre mendous task and handled such a force of men so successfully. His answer was, "By kindness."

Another illustration is that of Helen Keller. Robbed as she was of the senses of sight and hearing, her spirit was reached by that blessed woman, Miss Sullivan. In Helen Keller there was developed one of the most remarkable, one of the most wonderful souls of which we have knowledge. She has the greatest simplicity of character of which the world has any example. And I think I cannot better leave you than to point to this most perfect example of what kindness has wrought. The essayist appeals to us to put this great principle of Kindness into practice. We may not all be able to do so, but the saving grace is that we may all strive and aspire.

E. H. Pratt, M.D.: We all feel great love and admiration for Dr. Buck, and we always listen with profound interest to all his papers, regardless of how much they contain which may escape our apprehension, from his condensed and deeply analytical style of handling whatever subject. He always makes us listen and also makes us think, and in that way especially he does us great service.

It would be mere presumption in me to attempt criticism of any of Dr. Buck's productions. In my estimation, this paper needs no criticism and calls for no debate.

But the subject Dr. Buck presents may, perhaps, to advantage be further expounded, and some of its aspects elaborated. Permit me to attract your attention, therefore, to a few points which Dr. Buck's paper has suggested to my mind.

This paper advocates the abolition of disease by the cultivation of health, the annihilation of vice by the establishment of virtue, the abandonment of war of all kinds by the establishment of perpetual peace and harmony, advocating the love principle as the true panacea for human ills, all of which means almost universally a "right-about-face" in all the pursuits of mankind.

The establishment of virtue is the natural cure for vice, and the cultivation of Christian principles the remedy for sin, and the establishment of health the sovereign remedy for disease in all its types, just as heat is the cure for cold and light the cure for darkness. Throughout the history of this Institute there have been but two Bureaus that have stood for the preservation and cultivation of health and wholesomeness. One of these was the Bureau of Psychological Medicine, which died a natural death some years ago, and the other the Bureau of Sanitary Science, which still maintains its existence because it is supposed to consider health on so low a plane—that of physical cleanliness—that it has been permitted to continue its existence. Physical hygiene and cleanliness, indeed, are recognized as essential parts of good surgery, are necessary in obstetrics and the general practice of medicine, aid the action of drugs and other remedial measures, and thus have been not only inoffensive subjects to medical men, but rather necessary to getting on successfully in medical and surgical practice; but interior cleanliness is different. In the light, therefore, of what has been and what is, it would scarcely be safe to prophesy that Dr. Buck's suggestion to enter enthusiastically into the cultivation of health as the proper means for exterminating disease, would, in our time, at least, become an intensely popular measure in the Institute meetings.

There is a practical side to this question that may have a profound, although unmentioned influence in shaping the doctors' likes and dislikes. The observance of spiritual physiology cures diseases and prevents them and, if thoroughly inaugurated, would make such frightful inroads into the practice of medicine that the doctor naturally considers them his most formidable rivals and, consequently, their consideration does not find much encouragement throughout the medical

ranks. For this reason Dr. Buck's paper would have fared better, probably, at the hands of the people than at a medical convention, although it is very honorable in him to present the doctors with the real truth of the matter so that they can properly prepare themselves for a change of occupation if the enlightenment which Dr. Buck stands for, ever becomes universal. Forewarned is forearmed.

The study of light can be pursued most successfully by those who can see; that of sound, by those who can hear; that of touch by those who can feel, and the study of health will find its most ardent students among those who are interested in health, seeking it, dealing in it and ambitious for its accomplishment, and if doctors ever become truly health-hunters, Dr. Buck's paper will achieve great popularity with them. As it is, he must not be disappointed if most of his propositions are listened to respectfully, but quietly ignored and forgotten. If in his medical audience there chance to be a few who are in search of health for personal or possibly for professional reasons, his words of wisdom will not all have fallen upon stony ground.

Considering the subject-matter of the paper itself, the first question which naturally comes up, relates to consciousness itself. Is it or is it not solely dependent upon sense perception? If we were deprived of the concepts furnished by our various senses—if we had no memories of things heard or seen or smelled or tasted, or in any way sensed; were our so-called physical faculties all folded and their life-work blotted out—would self-consciousness still exist?

If consciousness is dependent upon sense perception, can it be increased and our happiness and health thereby enhanced by elaborate and systematic education of the various senses?

It seems apropos to the present occasion to call attention to the great work of Elmer Gates of Washington, in his study of brain cells and means for their development. He found that brain cells could be developed by appealing to the terminal extremities of any of the nerves of special senses. The special sense of touch Dr. Gates divided into five senses; the sense of contact, the sense of pressure, the sense of heat and cold and the muscular sense.

Now, if our degree of consciousness is dependent upon our experience in sense perception, in other words, upon the number of brain cells which our sense experience has evolved for us, the question of folded faculties, like that of color or music, and why not of morals and of truth perception as well, may hinge upon vibratory exercises applied to the nerves issuing from deficient brain areas.

For many years the science of phrenology has been laughed at by the medical profession and perhaps it was right; many of its propo-

sitions are certainly ludicrous, but brain localization of faculties is now a fixed fact in medical lore and limited only in its development. The principle is established and are not the faculties of mind and soul merely the harmonics of physical functions?

The paper suggests these questions. Perhaps a future one from this master mind, will answer them.

There is another important truth which is brought out by the doctor's paper which deserves a larger audience and a more extended consideration than it will receive in the American Institute of Homeopathy, and that is that the fundamental principles of so-called Christianity are nothing more or less than the laws of spiritual physiology, the observance of which is absolutely essential to the eradication of disease and the establishment of health, physical as well as mental and spiritual, and, being but laws of healthful existence, they should be taught in common schools in close association with the laws of the physical universe which are but their counterparts, such as the laws of gravity, of capillary attraction, and the others. The only way to get happiness is to give it; the only way to get health is to seek it; we become like what we think of; and anything we exercise grows, being as true of mind and morals as they are of muscles and that action and reaction are the same throughout our being on all planes of its expression, are simply scientific postulates that, if stripped of religious dogmatism and given their proper place as matters of scientific study in the schools would redound to the everlasting health and happiness of mankind.

Although Dr. Buck's paper is evidently intended to be more suggestive than exhaustive, there is one other law so important and practical in its application that Dr. Buck might, with advantage have added it to those to which he called attention and that is, that the true way to attain our desires is not to precipitately chase after what we long for irrespective of the fitness of things, but rather to render ourselves deserving. Then our blessings will seek us and thus save us much of the disappointment connected with our present style of struggling and striving. It would do away with office-seekers and the cruel, hot-headed pursuit of wealth and prosperity in all of its forms and firmly establish the wholesome custom of the office seeking the man and inaugurate a spontaneity of health and happiness that would be truly refreshing.

Speaking of thought control, I would like to call the attention of Dr. Buck and the members to the fact of what Dr. Gates calls dirigation, or the power to influence any condition or function of the body by mental or emotional concentration. He does not consider

that a man has any considerable mental or emotional power who is not able to fluctuate the temperature of an arm or a leg or any part of the physical body at least three degrees in a few minutes' time by steadily concentrating his thoughts and feeling upon the blood stream and the heat it produces. Mr. Gates has found by chemical analysis that intellectual and emotional states also preside over the qualities of the perspiration and the saliva and other digestive products which are mixed with the food and transported to the tissues, dispensing health and vigor or spreading disease and death as their influence is wholesome or noxious, proving thereby that respect for the laws of spiritual physiology is wholesome from the standpoint of physical health, while the indulgence of viciousness and of bad passions is suicidal.

The legitimate study of physiology, therefore, even from the doctor's standpoint, must of necessity be enlarged to comprehend the careful consideration of spiritual as well as physical laws of action and reaction. This is a great step toward the recognition of the universal truth that there is no religion outside of science and no science outside of true religion.

The crowning point in Dr. Buck's great paper is reached in the following remarkable paragraph:

"Is there, then, a vital dynamic to the subconscious self in man, comparable to fresh, pure air to the physical body and conscious self? I answer unhesitatingly and unqualifiedly that there is. Love is the vital dynamic, the elixir of life to the soul of man. Its expression is gentleness, kindness, and compassion. Not the mere absence of hatred, and the mildew and rot of indifference; but the gentle, persistent, active, habitual, and, at last, spontaneous and automatic exercise of simple human kindness."

Dr. Buck here defines the kind of love that is truly said to be Life. Words mean what we make them. We all have our personal interpretation of the words we make use of and there is no word in the English language that is capable of so great a variety of interpretation as this word "Love," and it was very wise in Dr. Buck to define accurately the kind of love which he advocates to be the elixir of life. Dr. Buck's love is not synonymous with desire; it is not the lust for power or preferment or self-aggrandizement or self-indulgence of any kind. It is not commercial. It emanates and glows for its own sake irrespective of reaction. It gets in the mere act of giving. Not being ambitious to control, it never dominates nor dogmatizes and, therefore, never antagonizes; it simply serves and is the fountain head of humility and personal liberty and for this reason it never mourns

or regrets. It does not seek so much to shape events as it does to correctly interpret them. It is the real living of the prayer "Thy Will, not mine, be done." It wants fire to burn, water to drown, and gravity to bump. It wants causes and effects to sustain their relationship, and it upholds the sovereignty of law. Instead of trying to control circumstances, and naming some occurrences good and others bad, it finds good in all things and basks perpetually in eternal sunshine throughout all the evolutions and changes of our earth life. It would not fight for Homeopathy, for health or for life itself. It would not fight at all; it would simply trust and serve, concerned more with what it gives out than how it is received. Like any other faculty, it grows by exercise and can be systematically and scientifically cultivated upon the universal principles of all evolution and development, and Dr. Buck is not going too far in claiming that its universal establishment by processes of early education will insure the emancipation of the race from its disappointments, its bitterness and its premature death.

In the sense employed by Dr. Buck, Love is truly the Elixir of Life and deserves to be added to our pharmacopœia, and its wonderful efficacy entitles it to be placed at the head of the list of all our remedial measures.

Periodic and systematic concentration is the secret of all great accomplishment. Perhaps the most remarkable example of physical development in the world to-day is exhibited in the person of Leonide Keating and it has been accomplished without either weights or pulleys or any other measure than that of intense mental and emotional concentration. What can be done with muscles and organs can be done with faculties and qualities of mind and heart and when we can get our own consent to consecrate our lives to the good of mankind in the complete trust that our service to humanity will secure for us ample reward and that there is no longer any occasion for our worrying about the workman being worthy of his hire, our fears of disease and death and sickness and failure and disappointment of all kinds will be completely exterminated, for the light of Divine trust will have expelled the darkness of our ignorance; and love, which is life, will reign supreme. The nature of our work will have undergone a great change, for you and I will no longer be mere body patchers, but will have become teachers, for such is the ideal interpretation of the profession of our choice. Sickness and suffering will be cured and prevented. The whole subject is a mere matter of focus of attention and persistent application,—merely the consecration of our lives to the study and the development of the desirable.

If I understand correctly the doctor's position—gratuitously supplying some omissions to arrive at the conclusion—he would not discourage our so-called physical investigations and measures, but lead us to enlarge our considerations sufficiently to enable us to perceive as well as to see; to heed as well as to hear; to cure as well as to relieve; to live as well as to die; to be doctors as well as body patchers. If we may be permitted this construction of his admirable paper, its popularity with us can most certainly be readily assured, for we will still be on good terms with our pill bags whenever they are needed, and we will be better stocked with good, sound, scientific and health giving advice, to which we have no objection to offer.

F. PARK LEWIS, M.D.: The inquiry to which Dr. Buck's admirable paper gives rise is whether its philosophy of open-minded receptivity may not apply to our pedagogy.

The intellectual training of our children is strenuous.

It has occurred to me that our methods resemble those which we employ in producing our electric light, when 97 per cent of the energy is wasted that 3 per cent may be used, by making a filament incandescent by the resistance which it opposes to the passage of the current. The filament is naturally soon destroyed by being made to give light through resistance. Our school methods destroy the vision of the children in regularly progressive numbers as their grades advance. Among those who enter the kindergarten myopia is exceedingly rare. Of those who graduate from our high schools one in four has acquired an ectasia of the posterior part of the eye-ball.

A method which destroys that which it is supposed to develop must have something in it fundamentally wrong.

Lately it has been shown that electric light may be produced *without resistance, without disintegration of substance,* and of a finer and pleasanter quality than ever known before. May it not be that we shall find that our direction of the finer psychical and mental forces has been as unintelligent and as unwise?

The problem is one that should appeal to psychologists, educators and physicians, and it is not impossible that a surer and better way may be found than that which we have followed.

THE ADVANTAGES OF GIVING PATIENTS WRITTEN HYGIENIC INSTRUCTIONS CONCERNING THEIR DAILY MODE OF LIFE

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NEW YORK

There are certain diseases and pathological conditions which are readily controlled by medicines, there are others which are influenced but slightly and uncertainly by them, and there are a few over which drugs exert no restraining power. On the other hand, in every form of disease, hygienic measures may with certainty assist the bodily powers in their struggle against adverse conditions, even though at times the battle may end in defeat; for the reason that in every case of disease, there are operating a number of causes to keep up the morbid condition, and to depress the powers of the patient, and some or all of those causes are removable causes. In each case some rule or rules of health are broken, occasionally it is true to a very slight degree. Therefore, besides our investigation into the abnormal condition of the organs, we should no less diligently and as a matter of routine, search out the causes which have led to the diseased state, and also the influences which are maintaining it. We should make a diagnosis of the causes as well as of the pathological condition. And it follows, also as a matter of routine, that we should not only prescribe a medicine, but proceed to remove all the causes which are removable. But this can be done only with the co-operation of our patient. In fact, the first thing to impress upon him is that he must work out a large part of the cure himself, that he is a partner with the doctor in this campaign for making him well. So we proceed to give him instructions concerning his environments and habits, not only those habits relating to the organ especially diseased, but any or all of his habits. For every organ is helped or hindered in carrying on its work by every other organ. Although, with increasing intelligence, people desire more and more hygienic advice and instruction, and although many patients ask for such help, there are still some who wish to be cured without any effort on their own part and without any attempt to overcome the causes of their ailments. Such persons need to be impressed with the importance of this part of the treatment. On the other hand, most people will listen to our advice with interest and respect, and then promptly forget a goodly part of it; for our instructions will embrace a number of different topics, and they will enter the ears of one in poor health, whose memory is below

par, and whose will power is inefficient. Therefore to magnify the importance of what we have said, to assist the memory of the patient, and to support his oft-yielding resolution by a reminder, we give him a written memorandum of instructions. This we hand him as we would a prescription for a medicine, telling him to observe its provisions as carefully as though it were the directions for taking a drug, and that this prescription of conduct is generally quite as important and is sometimes more important than the medicine which he is to take. Nor does the advantage from this procedure lie all on the side of the recipient. Applicable here is the oft-quoted saying of Lord Bacon: "Reading maketh a full man, conference a ready man, and writing an exact man." The mere act of writing these things helps to clarify our minds, helps us to decide more clearly, more precisely, what this patient should do; teaches us to avoid vague words and generalities, and to give specific understandable directions. Just as the writing of telegrams tends to compactness of style, so writing varied instructions on a single slip of paper calls for a welcome brevity and condensation. A few suggestive words only are needed, such as may be jotted down while conversing with the patient. To make clear my meaning I will suppose a few cases as types.

First, we are consulted by a young man threatened with pulmonary consumption, fever and tubercle bacilli being thus far absent. This patient receives a memorandum worded somewhat as follows:

Live in open air.
Ventilate rooms day and night.
Windows open top and bottom.
Avoid direct draught.
Avoid dust.
Avoid fatigue.
Breathe deeply.
Dress warmly.
Retire early.
Generous diet, especially meats, eggs, milk.
Eat slowly.

We explain to the patient that these instructions are tentative, that some of them may need modification, and that additions as well as changes in his rules, must be made from time to time.

The first card of instructions for our next patient, a high liver of a gouty or rheumatic tendency may read something like this:

Diet sparing.
Very little meat, eggs, etc.
Vegetables, fruits, milk in moderation.

Drink water freely.
No stimulants.
Exercise regularly, vigorously.
Exercise all muscles.
Exercise out doors.
Dress warmly.
Keep dry.
Warm baths with friction.

The third supposed case will be a dyspeptic. Some cases of dyspepsia may be relieved by attention to diet alone. The study of food for the various kinds of dyspeptics is a complicated one, and in practice the prescribing of diets is more or less experimental, often involving a number of changes before the successful course is found. But diet is not the only thing, and in a given case after noting the food or foods to be tried first, we might write these further suggestions:

Eat slowly.
Meals regular hours.
Rest after meals.
Brush teeth with up-and-down motion.
Alkaline dentifrice.
Fresh air.
Exercise all muscles.
Exercise muscles, waist and back.
Massage abdomen.
Regular time, evacuations.

Very different instructions may be given to other dyspeptics, and later on very different instructions will be needed by this patient. Lastly, let us suppose that a so-called "nervous" man consults us, one suffering some of the protean symptoms resulting from overwork or ill-balanced work of the nervous system. To some patients of this class, complete rest from all forms of effort may be an absolute necessity whether they can afford it or not; while others less severely overworked, may recuperate if they resolutely cut down their amount of work and nerve strain. This patient we will assume has suffered only a partial breakdown, and although a long vacation would be the ideal solution of his trouble, the restricted means of the patient require that we attempt to secure for him sufficient rest while he continues to support his family. So we start him off with this little list of suggestions:

Cut down work.
Do one thing at a time.
Make memoranda, instead of remembering.

Walk part way to business.
Breathe deeply.
Avoid alcohol, coffee, tea, spices, pickles, pastry.
Forget business in evening.
Retire early.
Warm bath first.
Ventilate bed room.

In each of the above cases the written instructions were very brief, fragmentary and incomplete. In actual practice they may be still shorter and less complete, it being sufficient to write merely catch words, to remind the patient of what has already been explained to him at greater length.

Since the advent of the trained nurse, we have appreciated the help which comes from accurately written reports of patient's condition from hour to hour; and even though such notes may contain unnecessary and tedious details, we would never on that account think of dispensing with their important information. On the printed blanks used by the nurses are places also for the doctor's instructions. But when the trained nurse is absent; in cases of acute or chronic illness confining the patient to room or bed, in which the care of the sufferer falls upon an untrained helper or upon a member of his own family, it is all the more important that the medical man's orders be not misunderstood or forgotten. Therefore he should plainly write his directions in regard to diet, bathing, ventilation, heating, visitors, conversation, etc. This paper should be kept on the table with the medicines and supplies, and should be looked over by the physician when he comes again. In a like manner when the doctor gives his written slip to an office patient, that patient should be directed to post it in a convenient place in his bed room, or better, to carry it in his pocket, in either event to read it over once a day to see whether he is carrying out its provisions, and, above all, when he consults the doctor again, to bring the slip with him for corrections and additions. My experience has been that the patient often neglects to do this, sometimes mislays the paper, and not rarely fails to carry out the instructions; but that need not embarrass the physician since the responsibility for such neglect lies with the patient. We will make a big mistake if we expect our directions to be carried out invariably. We must remember that we are not infallible, and that if we were, our patients are not patterns of perfection. We must use tact, must be ready to change our orders when they have been experimental and seem to have been ill-advised; but when sure we are right, we must be firm and insist with cheerful good nature on the continued efforts

of the patient to do as we bid him. But with our firmness we must combine sympathy and patience, remembering that the sick man is only human, and that he has less of courage and resolution than the well man.

Our written directions then must be modified from time to time in the light of experience, and of the changes in the patient's condition. They should constitute a sort of educational course for him with progressive lessons, during which he may learn to look upon his doctor as a "guide, philosopher, and friend." If the physician can establish this relationship with the patient, if he can teach him to form and fix habits conducive to health, he will not only be a force for good during that patient's life, but he will forge a bond between the patient and himself of the strongest and most lasting kind.

As I said before, patients will sometimes fail to bring back the written slip; and while we may expect it of them, we should not depend on them, but keep our own records. This can be done with almost no labor, and I believe with an actual saving of time, of work, and of tax on the memory, surely with a gain in exactness and precision. More easy of reference and more elastic than a book of record is a modification of the card index system. Instead of the rather expensive sheets of cardboard sold by the manufacturers, sheets of ordinary white paper cut to a uniform size, have the added advantage of occupying less space when filed away for reference. The current sheets may be kept in alphabetical order in a box or boxes on the office desk. After the date of each consultation, may be noted significant changes, if any, in the progress of the patient, and to the right of the sheet the medicine prescribed, while under that may be written a few words as a reminder of any new instructions which have been added to the patient's paper.

In conclusion, I would say that my own experience in giving people written directions has covered more than fifteen years, that I began gradually, feeling my way as I went, and that I met with no objection on the part of patrons. A few, it is true, gave scant attention to any advice, spoken or written, trusting apparently in the unassisted virtues of the materia medica; on the other hand, nearly all took my primer lessons seriously, while some of them taught me humility by showing an unreasoning confidence in my wisdom and judgment. Experience, then, gives me confidence in urging others to try this plan, and to improve upon it; it being a simple help in teaching the patient how to get well, and how to keep well.

DISCUSSION

Dr. George R. Stearns. *Mr. Chairman:* It is almost a truism that there are two sides to every question, and this is most often so in

the discussion of papers. I should almost feel that this paper is an exception. Of course, each case will have to be individualized; therefore, the only question which needs to come before us here is whether we should give such directions to all cases. The paper has already touched upon the part the nurse plays in every case, of taking notes which may be of great help to the doctor.

My own experience would lead me to say that it is more particularly in subacute and chronic cases that written instructions will be useful. I can see no ground whatever for objection to such instructions, and on the contrary, patients will usually be very much pleased to have the directions written out in a clear lucid manner.

The only objection that I can think of is that in our 20th century rush the physician might begrudge the time spent in doing this with all the other work of preparing remedies, etc. However, perhaps this should not have much influence. It is an advantage not only to the patient, but to the physician as well, for it reminds us of the instructions given, in bringing out many points, hygienic as well as therapeutic, which we might otherwise forget. This would offset any amount of time which might be given to it. Personally, I have only commendation for the plan, and believe it would be well to do this in cases both acute and chronic.

T. H. CARMICHAEL, M. D.. *Mr. Chairman*: I cannot hope to add to the strength of this excellent paper. Its peculiar strength, to my mind, is in the fact that it is the result of Dr. McDowell's own experience and practice and not a bundle of unsettled theories or made up from the text books.

I have jotted down a few thoughts, the first of which is that if we do not follow out the suggestions of the paper it will not be because we do not endorse them. Since the adoption of the card system of keeping accounts and taking case records some of us are well broken in to follow the essayist. Patients are favorably impressed by careful methodical office work. It is a kind of work that pays.

It would seem as if the willingness to be drugged is a mental trait that has descended through many generations. Patients will recollect when to take their medicine who would soon forget instructions to breathe deeply a few times every day, or to walk in the sunshine. This may be because matters of hygiene and preventive medicine are products of a single generation. Such memories will certainly be aided by written instructions.

There is an old Latin proverb, "Study without the pen is sleep," and it is said of the Third Napoleon that he never forgot anything that he had once written on paper. It is certain that both physician and patient will be benefitted by the practice of writing directions.

The principal objection, if there is any, has been mentioned by Dr. Stearns—the lack of time for such work in the rush of modern, every day practice. For this reason the thorough method of case taking practiced by the older homeopaths has fallen into disuse, and we wonder how they found time for such work. Dr. McDowell, however, assures us that this is not a valid objection, and we believe him. Some may object that these written instructions may be taken to other physicians and criticised adversely for mercenary motives. Such an objection is, however, hardly to be considered in our fight against disease.

THE TECHNIQUE OF THE FRESH AIR TREATMENT

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Hippocrates, the Father of Medicine, in about 400 B. C., gave us the first ideas in regard to judicious exercise in the open air, and the rest cure for consumption.

In Vol. 7 he says, "Have the patient walk if he feels benefited thereby; if not, to rest as much as possible."

After the much experimenting that has been done in every country of the globe, especially Germany, after the frequent shout of "Advance in Medicine" and of the "nearness to the stamping out of consumption," how little has been added in all these years to the real beneficial treatment of this disease!

The first authentic cures of consumption come to us about the year 1000 A. D., when Avicennia, a celebrated Arabian physician, and his pupils, reported cures by sending their patients into mountain climates; but since the teaching of these earliest writers how many fallacies have appeared, how many poor sufferers have been the victim of a "sure cure."

England can boast of the first hospital for consumptives, also the first sanitarium, but Germany has now passed far into the lead in this class of institutions, and has come nearest to bringing the treatment of tuberculosis down to a scientific exactness.

Two rival modes of treatment have sprung up among the German schools.

In one, no medical treatment of any kind, is used; a tubercular laryngitis is allowed to take its own course, and only general treatment is given. The patient is watched and examined several times daily. Exercise is prescribed, on his return the patient's temperature is taken, heart beat and respiration is noted; and should there be any increase in either, he is forbidden to exercise until improvement takes place.

The dining room, in this institution, is constructed with movable sides; and only the side shielding the tables from the wind is closed. The other three sides are left open, so the patient, in addition to sitting out, is obliged to eat and sleep in the open air; and as the climate of the Black Forest abounds in much rain and fog, with plenty of disagreeable, cold, stormy weather, the treatment is not always relished by the patients.

The only times they are allowed to close their rooms and have any heat is while disrobing for the night and dressing in the morning.

They rely very much on the stuffing process; five or six meals a day are always taken and the patient is required to eat a certain amount at each meal, whether he wants to or not.

A patient of mine, who had spent a year under my care here, with great improvement, spent the following year at this place in the Black Forest and, having been used to but three meals a day, he used often to complain to the physician in charge, saying that he could not eat and that his stomach was already upset. The doctor would shrug his shoulders and say, "Oh, you Americans and English have such tender stomachs. If you stay here, you must eat."

This institution is one of the few taking patients in any stage of the disease.

All patients with a temperature of one hundred or one hundred and one degrees are put to bed and kept there until the temperature goes down, even if it takes months.

The other German school cut, burn, curet, apply acids anyway to remove or destroy a tubercular deposit, whether it be in the larynx or elsewhere.

They utilize air to about the same extent, but do not allow patients to exercise until active processes have ceased and the temperature remains normal. Feed for excess of nutrition, but do not force a prescribed amount of food—see their patients once a day, instead of three or four times—massage and baths are freely given. Experiments with tuberculine, etc., have been given a thorough trial.

Throughout all the sanatoria of Germany one or the other of these methods is followed, each claiming a much larger percentage of cures than has been attained elsewhere in the world.

In looking over the literature of the advanced, civilized countries, two things stand out prominently in the treatment of tuberculosis. In fact, all are agreed that the two necessities are a life in the open air and excess of nourishment.

Here in Saranac Lake we supply the nourishment by three good meals a day and between meals some liquid foods, as raw eggs and milk, or the beef preparations.

I have found best results from the uncooked juice of a top round steak. The meat is cut small enough to go in an iron screw squeezer and with very little force the entire amount of juice is extracted and is taken as it comes from the meat, with only a little seasoning. It is seldom a patient objects to it, and it is one of the best tonics.

We require our patients to remain out of doors from seven to ten hours daily, in all kinds of weather, both winter and summer.

They are allowed to enjoy a short evening in a comfortable room, but as soon as they retire for the night their windows are opened, and so nearly the entire time is spent in the pure, uncontaminated, mountain air.

There is no doubt that where people have the means, and can reach a mountain health resort without too fatiguing a journey, better results can be expected where an absolutely pure forest and mountain air is ever present. But as there are so many from lack of means, etc., who cannot avail themselves of this, much can be done at home. The best thing to do under such circumstances is to commence systematically with an outdoor treatment. This, though difficult in the home, can be accomplished.

For the absolutely poor and destitute, the special hospital, or sanitarium, is the only place. Patients enjoying moderate home comforts can remove all superfluous furniture from the largest, sunniest, best ventilated room in the house. Should he be really ill this will be his living room. With a screen to stop direct drafts all windows can be raised, and a generous amount of fresh air obtained.

Should he be well enough to go to the porch or yard, he must have a shelter to break the wind in inclement weather.

A chair in which he may sit or recline (a common steamer chair answers well), is a necessity; also plenty of warm wraps in cold weather, and a sunshade in extremely hot weather. In other words, he must be made comfortable while taking the air, and provided with plenty of reading matter or amusement, for a happy mind is a great aid to a cure.

Some have utilized a roof, where yards and balconies were not to be had. All this must be under the strict supervision of the attending physician who will, at the same time, attend to the dietetic and medical treatment, regulate the exercise, and see the patient frequently enough to keep his every symptom under advisement.

DISCUSSION

CARL CRISAND, M. D.: Tuberculosis is a highly communicable disease caused and fostered in man and animals by living in overcrowded and ill-ventilated apartments. Darkness, filth and moisture, and air filled with respiratory and other impurities favor its development; fresh pure air and sunshine and hygienic surroundings destroy it.

It is rare amongst the wild animals and races until they come in touch with so-called civiliation. Even the carefully fed and housed animals are more prone to the disease than the half starved herds on

the plains. "Amongst sheep, which are practically never housed, tuberculosis is rare."—Hillier, p. 161.

"It is the tissues of the animal man," says Hillier, "on which the tubercle bacillus preys and flourishes; it is the animal man which must be fortified against it. Departure from the natural animal life to the artificial indoor life of civilization renders the introduction and establishment of tuberculosis a possible disaster, should it occur."—Hillier, p. 159.

Animals inoculated with pure cultures of tubercle bacilli and then allowed to roam the wild forests, recover or show only small lesions; this was proved by Trudeau's well known experiment with rabbits.

Hillier presents, in his book on tuberculosis (p. 165), a very clever comparison between the growing seed and the tubercle bacillus. The seed gaining its nutriment from the manure in the ground, and the tubercle bacillus from the respired organic impurities (another form of manure) which are re-inhaled and absorbed by the tissues and cause the vegetable fungus, tubercle bacillus, to flourish.

Although it has not been demonstrated that pure air and sunshine can affect micro-organisms imbedded in the tissues of the body, is it not possible that the effect of sunshine is similar to the Roentgen rays, in that it stimulates circulation, invigorates the tissue cells, favors phagocytosis and thus causes the destruction of the bacilli or possibly their withdrawal to deep-seated tissues? The germicidal properties of the sun's rays, and even diffuse sunlight, are well established. Finding less and less effete matter to feed upon the bacilli die of starvation, or their field of operation becomes encapsulated and repair of the diseased tissues progresses until the recovery of the patient is accomplished.

"For the cure as well as the prevention of tuberculosis first and foremost, transcending all other measures, as the sky transcends the loftiest habitation, comes pure air."—Hillier, p. 159.

Brisk currents of fresh air, in and out of doors, reduce the chances for the invasion of our bodies by virulent micro-organisms, because they are kept in motion. And vice-versa, where the air is still and undisturbed bacilli swarm and infect man and beast.

The theory that diminution of oxygen and increase of carbonic acid gas, in an atmosphere vitiated with the products of respiration, produces the baneful effects, is fast losing ground; for the experiment of Daremberg, a French physician; Mosso, an Italian physiologist; Pettenkoffer, Brown-Séquard and others have proved that an atmosphere of twenty parts CO_2 and sixty parts air can be inhaled without discomfort. "Brown-Séquard and d'Arsonval went far to show that the

toxic qualities of confined respired air are due to the expired vapor containing organic matter." (Hillier, p. 166.) Which vapor, having been condensed into a liquid and injected into rabbits and guinea-pigs, killed them.

Septic micrococci inhabit, by preference, impure air and add their effects to those of the tubercular process.

Fresh air treatment must not be confounded with exposure to the elements. The patient should at all times be well shielded from high winds and storms and the burning sun. A gentle breeze produces tranquillity of mind and body and lulls one to sleep, but strong, blustering winds are disquieting and irritating. Basking in the sunshine has a remarkably soothing effect upon the body and stimulates circulation. Sun-baths in a solarium are a great luxury to a poor consumptive, but he must not be exposed to a scorching sun. Absolute comfort of body and mind is of paramount importance to the patient.

For purifying the air and ventilating the room in which a consumptive is living, there is nothing more effective than an open window and a roaring fire in the hearth.

"Phthisis is least frequent among those who dwell on mountains or on open and comparatively uninhabited plains and is relatively rare in the following order: On certain sea-coasts, on certain islands enjoying an ocean climate, as nearly pure as possible; in certain desert places of considerable extent—such as the great American and African deserts and the Steppes of Tartary—in the polar regions, and, finally, at elevations, the rarity of the disease increasing with the altitude."—Solly, p. 80.

Which is the best climate for consumptives? "Climates of every variety have at one time and another been recommended for consumption. High altitudes and the sea-board; warm climates and cold ones; the ocean and the desert; the Equator and the Poles. The underlying truth is at length being recognized. The chief virtues of these different resorts is the open air life."—Hillier, p. 180.

In general, however, the following facts have been established by our foremost students of climatology, such as Bowditch, Cohen, Solly and others. A damp cold climate favors the development of the disease more than any other; next a damp hot climate and next a dry hot climate; the least conducive to the disease is a dry cold climate. We therefore argue that the last named, the dry cold climate, is the most favorable for the treatment of the disease and the damp cold climate is the worst.

In connection with the selection of a climate for a consumptive it is not so much a question of heat and cold as of humidity. "The in-

fluence of a damp soil upon phthisis has been proved to be even worse than that of damp air, hot or cold."—Solly, "Med. Climatology," p. 84.

Gardiner says that he would "prefer the cold of the arctic zone to the heat of the tropics as an agent in arresting tuberculosis," p. 23. "The Care of the Consumptive." This writer also recommends tent life in a properly constructed tent.

The disease arises more frequently in a cold, damp climate, but runs a more rapidly fatal course in a damp hot climate.

Extreme fluctuation of temperature with *dryness of air* seems to have no baneful effect upon the consumptive, but variably with *dampness of air* predisposes to phthisis. Damp heat, while not proven to have a positive influence on the disease, it has at least, a decidedly unfavorable one and hastens its progress probably by favoring the development of the bacilli.

Although our first thought for the consumptive is to get him into a moderately high altitude and dry climate, it is interesting to know that both asthmatic and phthisical patients do well at Salton and Indio in South California. The former is 270 feet below sea level. Solly states that cases of chronic bronchitis and asthma do well near the shores of the Dead Sea, which is 1,316 feet below the level of the Mediterranean, and that a sanatorium is to be erected there for their accommodation.

The most important effect of diminished barometric pressure is to increase the amount of haemoglobin and red blood corpuscles in the blood. Consequently phthisis is much more rare in elevated climates than in others, and that consumptives, as a class, are much more benefitted by high altitudes than any others, as proved by statistics."—Solly, "Med. Climatology," Pp. 99 and 100.

The proper feeding of consumptives is a deep study. How can we best conserve the integrity of and fortify the tissues of the body, which are constantly in danger of attack from the disease, and increase their power of resistance, and on the other hand induce rapid repair of diseased tissues and favor the expulsion from the body of all detritus. Increase the powers of assimilation and elimination and the problem of how to save our consumptives is solved.

The patient's strength is usually much below par and what little remains must be prudently conserved by absolute rest, if he carries temperature, and scientific feeding must build him up. Hyper-alimentation, with equivalent elimination is all right, but the former without the latter does harm. Drinking large quantities of water to flush the urinary and alimentary tracts is also very important.

What is the proper clothing for consumptives? Any kind that furnishes warmth and comfort to the individual. Personally I find

that thin underwear with an abundance of outer garments is the best plan. When indoors, the outer clothing can be removed one at a time until the patient is comfortable. When out of doors, one garment after another can be added until the proper amount of protection is obtained. Closely woven underwear, which prevents proper ventilation of the body and holds all vapors emanating from the body, is a filthy abomination and does a great deal of harm by causing resorption of the poisons, which have been cast out by the pores of the skin.

What shall we do with our patient? That depends upon the patient. If he is the bread-winner of a dependent family and the disease is in its earliest stages, he may continue to work and remain at home under the care of a competent physician. If he can afford to give up his work, it is far better for him to do so, and make "getting well" the business of his life; how shall he do it? We must have the faithful co-operation of our patients, else all our efforts in their behalf are futile and a waste of their time and ours.

At home the patient can lead a systematic, temperate life, eat plain, wholesome, easily assimilated food; avoid alcohol *in toto* as a beverage; avoid pastry, sweets and condiments; drink milk, rather than tea or coffee, because it is food and drink. The daily cold water rub in the morning is not only a luxury, but a necessity. It stimulates circulation, invigorates and fortifies the body against the liability of taking cold. Even in the crowded cities patients can get considerable fresh air by keeping bed-room windows wide open or by sleeping on protected piazzas and roofs. A roof-garden makes an excellent camping-ground, because it is high and dry.

After patients have once tried sleeping out of doors, nothing but a storm will drive them into the house to sleep.

Do not be afraid of night air; it is more free from dust, smoke and poisonous gases than day air.

Although the windows and doors in a bed-room are open day and night, pure, fresh oxygen is not so plentiful there as out of doors, where the supply is unlimited and is not vitiated by the exhalation from the body.

In the majority of instances it is far better for a consumptive to go to a sanatorium in nearly the same climate in which he has been living, and to which he must return and work after his recovery. Near home he can see friends and relatives occasionally; in far off climes he may die of nostalgia, though living in an ideal atmosphere and surrounded by all possible comforts and luxuries of life.

"If I had to choose," says Knopf, "between sending a patient to

what is usually considered an ideal specific climate, but where he would live as in an ordinary health resort, or keeping the patient home in a fairly pure atmosphere and applying the hygienic and dietetic treatment under constant medical supervision, I should choose the latter method of treatment, and I think the patient had a far better chance of recovery."—Knopf, "Prophylaxis and Treatment of Pulmonary Tuberculosis," P. 205.

Daremberg's recital of his own experience gives the most complete summary of the fresh air treatment of consumptives, having been one himself; he says: "In 1876, after having passed several months between the four walls of a small room in Paris, I arrived on the French Mediterranean coast. I stretched myself out all day in the sun; at night I lay with my window open. As Voltaire says: 'The hope of recovery is half a recovery.' Soon my powers revived; I could walk, make small excursions, find pleasure in existence. I discovered that the sun of my life had not yet set. It is good to feel oneself reborn.

"This life in pure air, night and day, stimulates the appetite, improves the digestion, suppresses the fits of coughing, facilitates expectoration and the respiratory movements, invites calm sleep. And when the consumptive has an access of evening temperature, that access passes almost unperceived by him. Generally both fever and sweats gradually disappear."

Give to our consumptive the tripod of a generous supply of pure air and sunshine; an abundance of the most wholesome food and cheerful hygienic surroundings and you will strengthen his powers of resistance to the disease, inspire him with new energy, hope and determination, and restore him to a life of happiness and usefulness.

ARTHUR FISHER, M. D.: The subject of this paper reminds me of a case that came to my notice a good many years ago. The first one was a man in England who came from a large family of brothers and sisters, all of whom died of consumption. This one took a commission in the army, went out to the peninsula and followed the course of the campaign under Wellington. He returned perfectly well, and lived to a good old age. He was the only one of the family that lived.

A. WORRALL PALMER, M.D.: The paper, though short, has very clearly and fully given all the salient points of this, by far the most important portion of the treatment of phthisis. But there are two procedures for home treatment to which I should like to call your attention. From my observation of the several localities that have been found most beneficial in the cure or relief of tuberculosis, it is very noticeable

that pine-forests are almost invariably present; therefore, I believe that the exhibition of a pinus vapor is not an unimportant factor. Reasoning from this, I recommend the breathing of vapor from oleum picis liquidæ as continuously as possible. This can be very conveniently accomplished by the use of the Smith-Gardener respirator. This small instrument is supplied with valves so that the vitiated expired air does not return to the receptacle from which the vapor emanates, and the whole affair is so light in weight and arranged so handily that a patient can use it for hours with the greatest ease.

Furthermore, there is another simple procedure which is being lost sight of too much, judging from the good it has apparently assisted in accomplishing in my father's and my own practice, that is the systematic, forcible, full inflation of the lungs, In high altitudes this is done involuntarily, of course, but in the conduct of home cases I fear it is too often overlooked, or the patient is merely directed to "breathe deeply for a few minutes two or three times a day." In my experience such general or elastic directions are seldom if ever carried out more than a week. Very explicit directions, and usually some instrument with which to carry them out is needed in order to impress the patient with the importance of the procedure sufficiently to make him take the trouble of performing it. The instrument which I wish to recommend is the glass substitute for the old Howe's tube, which is simply a tube supplied with a valve to obstruct the expiration. This artificial obstruction forces air into the alveoli in the apicis and elsewhere, which are seldom inflated by ordinary respiration, thereby reducing capillary statis, and at the same time the over-distension of the healthy alveoli, surrounding a miliary tubercle or small vomica, aids the dislodgment of contents, and assists adhesive inflammation of its walls. At first this tube can be used only a few minutes at a time, on account of causing vertigo, but should gradually be increased to a half or three-quarters of an hour three times a day.

WATER AS A REMEDIAL AGENT

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When your chairman, some weeks ago, asked me to present a paper at this meeting and gave me the subject as "Water," I assumed that I had a fairly good subject. After considering the subject for awhile I found that it was too broad to be fully considered in the time allotted; also to attempt anything original on the subject was impossible, for I find that the recognized uses of water to-day, are much the same as that of the ancients centuries ago, and stranger still the technique is also practically the same.

The subject matter of this paper, therefore, must necessarily be made up largely of extracts from various authors and text-books, ancient and modern, with little attempt at originality, and the scope will be confined to the *physiological internal effect of water,* leaving the external use for separate consideration.

Historically water, without doubt, is the most ancient of all remedial agents, being used both externally and internally. By reference to the earliest medical literature we find its use advised almost to the extent approaching panacea. Kellogg says: "No other agent is capable of producing so great a variety of physiological effects. No other is so universally present, and hence none is so readily accessible for meeting the various exigencies of accident and disease." The ancient Egyptians, Hebrews, Greeks, Persians and Hindus all employed water in the treatment of disease, in much the same manner as do their representatives at the present time. Hippocrates devoted one of his books entirely to the subject of water as a remedy. During the middle ages the Arabic physicians were enthusiastic advocates of the use of water, especially in fevers, and their directions for its use in small pox, measles and other diseases cannot be improved much at the present time. In 1675, M. Barra of Lyons, in a work published, pronounced cold water to be the best of all remedies for fevers. Again Kellogg speaks of a small work published in 1747 by John Wesley, founder of the Methodist Church, entitled: "Primitive Physic," for use among the common people. Though not a physician, Wesley by observation and knowledge of methods in use at that time, advises the use of water for various ailments, which are to-day recognized beneficial procedures, while others are on the border line; he says for asthma for present relief, vomit with a quart or more of warm water. The more you drink of it the better. This certainly is not bad treatment. For

cholera morbus, drink two or three quarts of cold water, if strong, or of warm water if weak. For a cold, drink a pint of cold water lying down in bed. For stone, to prevent its occurrence, drink a pint of warm water daily before dinner.

Thus, hydrotherapy came on down through the ages, struggling for general recognition, without any special system until the exploits of Priestnitz, an uneducated peasant, early in the eighteenth century, by his wonderful cures, brought it to the serious attention of the profession.

When Fleury in 1852 published a scientific treatise on the subject. Later Liebermaster, Brand and Ziemissen of Germany, and especially Winternitz of Vienna, have established a scientific hydrotherapy based upon definite and accurate principles. While other remedial agents have been heralded abroad as wonderful, only to sink into oblivion as promptly, water has stood the test of time and to-day is more esteemed than ever by the profession, and the remarkable fact remains that the technique of its use today is so nearly the same as centuries ago.

There is no doubt that water is an all powerful agent in combating not alone acute diseases but chronic as well, not to carry the theory to the extreme that the hydropaths do, in claiming to cure all diseases, but as an adjuvant.

The important thing to study is the technique of its use internally by the mouth and irrigation of cavities, flushing of the colon, and externally by bath, compress, etc., for this technique the different works on the subject should be considered.

Here, in speaking of the Brand treatment of typhoid fever, which is water, water, water, externally and internally, says: "A treatment which in a large number of cases offers us a reduction of mortality to about 3 per cent. in a disease which destroys from 20 to 40 per cent. of all persons attacked, treated otherwise, demands a trial, and we are guilty of neglect if we permit prejudice, difficulty of execution, or any obstacle to deter us from adopting it."

Kellogg says: "Water-drinking is an internal bath, it dilutes the fluids of the body in which the cells and fibers are bathed, it purifies the body by diluting the medium in which it lives." He further says: "Water is absorbed from the stomach very slowly. This takes place chiefly in the intestine. Absorption is stimulated by the presence of CO_2. Distilled water charged with CO_2 is the best of all drinks as a beverage for use in connection with hydrotherapy. It is soothing to the stomach, more rapidly absorbed, hence more readily quenches thirst." This accounts for beneficial uses of the charged waters in gastritis and various stomach disorders. To the great thinning of

blood, which follows copious water drinking, is due the remarkably increased activity of the kidneys, skin and bowels, which it produces. Examination of the urine shows not only that the quantity is increased by water drinking, but that the urea and other solid constituents are also increased.

Baron Liebig showed long ago that water drinking powerfully influences metabolism, increasing both assimilation and disintegration, especially the former. Thus in all forms of toxemia, copious water drinking is indicated. Again quoting from Kellogg: "By increasing the volume of blood in the body, the blood pressure is raised, the heart movements become more energetic and the functions of the glands, both excreting and secreting increased, thus accomplishing greater elimination." To increase the volume of blood a small quantity, 4 to 6 ounces, should be taken at intervals of one or two hours during the day. When the amount of water supplied to the body is insufficient the body may be compared to a stagnant pool, which necessarily encourages reabsorption of the toxins. Thus in the words of Kellogg: "Cold water drinking is especially indicated in cachexias and diatheses, for instance in rheumatism it is beneficial by diluting the blood, thus increasing the volume, enabling it to dissolve, and carry off the uric acid and other excreta, also stimulate the activity of the skin." In diabetes free use of water is advantageous, by carrying off excess of sugar, which is not oxidized. Water increases amount of urine and increases elimination. Witness the result when this balance is not maintained, less water drinking diminished excretion, coma and the end. In fevers the same law pertains, increased elimination of toxins by kidneys, skin and bowels—thus relieving the system; water also dilutes and dissolves the poisons in the alimentary canal, and by getting this tract in a more nearly aseptic condition you have diminished the largest field of toxin absorption and given nature a chance to again take charge and restore health. This is materially aided by colon flushing. In a case of chronic inactivity of the skin, the patient says: "I never perspire." Why? Only for lack of fluid in the body, and inactivity of the skin; water drinking will improve this condition. Patients come to you and say "I have a cold." This is a misnomer, for usually it is intestinal infection. Copious water drinking relieves this condition by increasing the elimination of tissue poisons. The same may be said of chronic "biliousness," so-called. This also is a misnomer, it being instead chronic toxemia, resulting from absorption of toxins from the alimentary canal, more water drinking is a potent aid in relieving this trouble. The same may be said of constipation—a glass or two of water taken an hour before breakfast and on retiring

will often cure many such cases. We have all been called upon to treat the pale, spare, cold, constipated patient. Invariably such a patient upon inquiry will tell you that they never drink water. This class of patients want more water, the effect in many cases is magical. In gastritis, dysentery, hepatic or renal calculi and all kindred ailments, copious water drinking, hot or cold, is beneficial, even though it be thrown up, or increases the number of stools in dysentery, it does more good than harm by diluting poisons, soothing the tissues and stimulating secretions. The time of drinking water should be studied as carefully as the quantity. In dilatation of the stomach with corresponding atonic digestion, copious water drinking, hot or cold, as well as all excess of liquids, should be avoided. Water with meals should be drunk before or after, not during.

The habit of hot water drinking, which is so much in vogue, should be advised with care. Briefly, hot water is indicated in hyperpepsia, while in atonic dyspepsia it should be avoided. The reason is obvious. Hot water first stimulates, then contracts; hence as in hyperpepsia there is an increased activity of the secreting glands of the stomach, contract the blood vessels, reduce blood supply, and thus diminish secretions.

Drinking freely of cold water should be avoided when a person is either fatigued or sweating profusely. Feeble patients should avoid free drinking except just before exercise. The use of water by irrigation into the cavities of the body and orifices is beneficial and urgently needed at times, especially the bladder, uterus, ear, colon, abdominal cavity after surgical operations, intra-venous for surgical collapse and hemorrhage, and stomach in various forms of gastric disorders. Unquestionably the custom of indiscriminate stomach lavage and colon flushing has been abused and oftentimes carried to the extent of positive harm. Still, there is a limit of usefulness in these proceedures, which should be carefully studied.

The use of mineral waters cannot be considered comprehensively in this article, yet in the study of hydrotherapy this fountain of nature's gift should not be overlooked. Nature mixes and holds in solution in her vast storehouse, the various elements, minerals, salts, etc., and pours forth numerous mineral waters peculiar in taste, constituents and curative properties, which man is unable to imitate in the finest laboratories by the most expert chemists in the land. Murchison aptly says: "The analysis of a mineral water does not indicate its complete medicinal value, nor can the action of the water be wholly accounted for by the ingredients shown by analysis."

In conclusion I quote Hare in his system of general therapeutics, which I think is a fair comprehensive resume of the subject, in which

he says: "It is my aim to stimulate a revival of hydrotherapy by a plain unvarnished exposition of its methods, and results, from the most reliable sources; but not to encourage its application as a sole remedy to supplant all medical or other agents, and thus rank myself with those empirics, the hydropaths, who have done much to descredit the remedial value of water."

Futhermore, Hare says: "He has derived the opinion expressed in the summary resume from the observation of over one hundred thousand procedures in private hospital and dispensary practice and to sum up the aims, capabilities and results of hydrotherapy it may be said:

"First, we possess in this method a valuable auxiliary to methodical treatment of many though not all acute and chronic diseases.

"Second, in acute diseases its value is most evident in the *early* stages of pyrexia in which it will accomplish more than any other remedies. It may also be usefully applied in non-infectious diseases of short duration.

"Third, in many chronic diseases it has proved so successful after failure of medicinal remedies that *no case should be yielded up as hopeless until hydrotherapy in some form has been tried.*

"Fourth, domestic treatment by the methods here indicated will suffice in most cases, but if these fail a methodical treatment under an expert hydrotherapeutist may be to the advantage of the patient."

Of course the above conclusions are based upon scientific hydrotherapy, which includes the full technique.

In the preparation of this paper I am under obligation to Dr. J. H. Kellogg and Dr. Hobart A. Hare, from whose works I have made copious extracts.

DISCUSSION

HENRY E. SPALDING, M. D.: Water is one of the most abundant elements in the natural world. It is necessary to the maintenance of animal life, and when that life comes in conflict with disease its use may be so regulated and adjusted as to make it one of the most potent remedial agents. This does not apply to one or two diseases, or classes of diseases, but to all diseases. While it may not be potent alone to overcome all diseased conditions, it is so valuable as an adjuvant that it may rightly be recognized as more nearly a panacea for all human therapy, which includes the full technique.

Among other properties of water, its power for absorbing and communicating heat and as a solvent are most conspicuous and valuable. The time allotted for this discussion will not permit a general consideration of water as a remedial agent and what I have to say will

be confined to the latter named quality, its solvent powers. Even this alone is so large a subject that we can but glance at it.

Water is the one universal solvent. We speak of substances being insoluble in water. In degrees that may be so, but it is safe to assert that there are no single elements in nature that it may not hold in solution, or in so minute suspension as to be practical solution. Foods taken into the body are by the process of digestion rendered soluble. Water takes them up and carries them to the tissues where they are transformed and vitalized with live matter and thus rendered insoluble. It now absorbs the products of metabolism, dead matter and hence soluble, and carries it to purifying organs, like the kidneys, liver and skin, to be transformed into elements needed by the body or to be thrown off as waste matter. By the process of digestion food is changed largely into sugar and peptones, and they are among the most soluble of substances. The products of oxidation, carbonic acid gas and urea, are freely soluble and hence freely eliminated. Products that are less soluble, like uric and oxalic acid, if produced abundantly are prone to accumulate in those parts of the body where the circulation is least active, and produce conditions called disease.

With these brief suggestions of the part water takes in the maintenance of life, we may, as briefly, consider the avenues through which it may find its way into the body. Drinking it into the stomach is the usual and normal way. If, however, from some cause the power of swallowing is interfered with, or the stomach ejects it, or the demands of the body are so great and urgent that this ordinary method of supply cannot meet them, it must then be introduced in other ways. These may be by rectal enema or colo enema, by gastric lavage, by intravenous, subcutaneous or intraperitoneal injection.

Water, alone or combined with nutritive elements, may be thrown in small quantities, and at frequent intervals, into the rectum and in larger quantities into the colon, whence they will be quite promptly absorbed into the circulation. In many most urgent cases it is not retained in sufficient quantity to meet the requirements of the case. It may be carried by the stomach tube into the stomach and retained there, and still be of little immediate benefit, for it is only after passing through the stomach that absorption takes place to any appreciable degree, and in the cases calling for an immediate and abundant supply it is likely to be ejected or the atony of the stomach be so great that it acts as a reservoir which must be overdistended before it passes on into the intestinal canal.

Water acts most promptly when thrown, as "normal saline solution," into the veins. Every surgeon appreciates its value in emergen-

cies resulting from loss of blood or from sepsis. To safely use it in this way at least one skilled assistant is needed, and while it is thus used thousands of times without attending ill effects, it is not absolutely free from accidental risks. Where proper assistants are at hand, as in hospitals and cities, this method of use is most valuable in the class of cases referred to. Under other circumstances, and for a still larger list of cases, subcutaneous, or more properly interstitial, injection of water, alone or combined with medicaments or stimulants, is a ready and efficacious method of administration. Its effects are not as immediate and its filling the blood vessels is not as complete as the intravenous method, but in selected cases it is better. Where there has been surgical loss of blood and the bleeding vessels are or can be closed by ligature the intra-venous is unquestionably the best method. On the other hand, if the hemorrhage be concealed, or post-patem, or intestinal (as in typhoid), in fact, in any case where the bleeding vessels cannot be ligated and their closure depends upon the formation of coagula, suddenly increasing the volume of the blood current may dislodge the forming clots, and immediate coagulation be prevented by the lessened per cent of fibrin incident to the added water. Thus the means used may thwart the object sought for and the danger increased rather than lessened. In these cases the interstitial injection is far preferable. In diabetic coma flooding the system with water by intravenous or interstitial injection has, by diluting the saccharine blood and stimulating excretions, relieved the coma. Here, from the fact that wounds in the diabetic heal badly and tend to gangrene, the interstitial is the better method. In exhausting diarrhoea I have found the interstitial injection of saline solution, repeated perhaps daily, to give comfort, maintain the strength and promote recovery.

During my last term of service in the Massachusetts Homoeopathic Hospital I had under my care a severe case of typhoid in the person of an old school physician. He had a sudden attack of most profuse intestinal hemorrhage. He had two copious discharges of fresh blood and clots, followed in the course of two hours by discharges recurring every few minutes. His pulse was very weak and he was rapidly sinking. I injected between the breast and the axile about a quart of salt and gelatine solutions with one-half ounce of brandy. Of course, other means, like ice bags on the abdomen and internal remedies, were used, but I believe that without the injections nothing could have saved him. As it was his strength revived and the hemorrhage lessened. The next morning the injection was repeated on the other side of the chest and in a few hours the hemorrhage had practically ceased. Whether most credit should be given to the gelatine in promoting

coagulation in the mouths of the open blood vessels or to the water in supplying fluid to the depleted system, it is impossible to decide. Probably credit should be given to each.

Intra-peritoneal injection of saline solution has, as far as I know, been little used. We have all observed the rapidity with which the fluid is absorbed and the pudse improves in strength and volume when the abdominal cavity is filled with saline solution before closing the wound in abdominal section. Before a meeting of our local medical society I advocated this method on account of the larger quantity that could be introduced than in the subcutaneous, and the facility with which it might be done, especially in post-partem hemorrhage and eclampsia, although I had never heard of its being done. Subsequently, there was brought to the Maternity, during my term of service, a case of impending convulsions with almost complete suppression of urine, only four ounces having been secreted during the previous twenty-four hours and that highly albuminous. She was semi-conscious, practically without sleep for the previous forty-eight hours. Muscular spasms in the various parts of the body. Vomiting, or empty retching, every few minutes, even a spoonful of liquid being immediately expelled. Nutrient enemas were tried, but the anus was open and they flowed back as fast as they were introduced. The usual medication was resorted to without effect. Steam, hot air and the hot pack were tried to induce sweating, but without avail. A sub-mammary injection of one and a half pints of saline solution gave sufficient relief to enable her to take and retain small quantities of liquid food. This relief was only temporary. The vomiting soon returned as persistently as ever. The case was desperate. Now, with the consent of my associates, I determined to try the experiment of an intra-peritoneal injection of saline solution. I threw into the abdominal cavity some more than two quarts of warm saline solution. The effect was almost magical. The restlessness subsided; she was soon able to take and retain liquid foods; she dropped into a quiet sleep and a gentle perspiration came out over the body; the kidneys began to act. Liquid foods and water were forced to the utmost. The second twenty-four hours after the intra-peritoneal injection she passed seventy-two ounces of urine. Twenty-four hours later she was delivered of a dead fetus, and her recovery was without incident.

ARTHUR FISHER, M. D.—I will mention my own personal experience. I labor under cataract of some years' standing, which I have treated by means of a head-bath every morning on rising.

My method is to place a large wash basin on the floor, raised to a cant by means of a board under the further edge. I place a jug con-

taining a pint of hot water and another with a quart of cold water within easy reach. I then lie down, one day on right side, next day on left, thus soaking each side of the head alternately once in forty-eight hours, in water at a comfortable temperature. While in this position I bathe the head and eyes and gradually reduce the temperature by the addition of cold water, at last pouring the balance of the cold water (about a tumblerful) over the head.

I have also found the application of warm water very grateful to the eyes and hot water salutary in catarrh of the larynx and the nose.

THE VALUE OF CORRECTIVE EXERCISES

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In presenting this brief paper for your consideration I may be accused of wandering from the true law of similars, but as about every one has done this I offer no apology, particularly as I bring to your attention a purely natural method of cure or elimination of disease which is generally misunderstood and neglected. The modern history of remedial gymnastics began with the work of P. H. Ling, early in the last century. In America Dr. Charles F. Taylor began treating diseases and deformities by movements, massage and gymnastics in the fifties. Though his methods and apparatus were crude, his results were in the main very succesful. Dr, Taylor had previously studied with Dr. Roth in London, whose work at that time was receiving considerable attention. In Germany corrective or medical gymnastics have received more attention and have been more nearly perfected than in any other country. Of course, the work of Ling and others in Sweden was the very first to command the attention of medical men, but the work done by Dr. Hoffa of Berlin, Dr. Tausch of Munich, and Dr. Schulthess of Zurich is an advance of all others, and their inventions of labor saving devices have been of greatest benefit in mechanotherapy. We occasionally hear it said that hand massage and free exercises without apparatus will acomplish all that can be done by machines or apparatus and will do it better. This is certainly a mistake. Vibrations, for instance, to be efficacious must be vigorous and persistent. The requirements in this direction are so great that the operator, though he were unusually strong, would find it impossible to treat more than a very few patients in one day, and though he were unusually skilled he could not possibly accomplish the same results as with the proper use of a vibrator. The same may be said of abnormal curvatures of the spine and other conditions that may be amenable by gymnastic treatment. Again the patient does not expend so much energy when assisted by the use of apparatus as when the same results are attempted by free hand exercises. This is a very important matter with many patients who are weakened by disease or long-standing deformity. Medico-gymnastic movements are usually divided into four sections. *First,* passive. Those made by the operator or machine without voluntary effort on the part of the patient. *Second,* assistive. When the patient helps more or less in the accomplishment of the movement or exercise. *Third,* active. When wholly

executed by the patient. *Fourth,* resistive. When the operator makes resistance, or when a machine is made to resist the efforts of the patient. It is always important that a patient begin right, with passive or but little active work, and whatever ailment may be, massage is usually the first step. Friction, kneading, pressure, percussion, vibration, flexion, rotation, circumduction, extension, etc., is so applied that the flow of lymph in the lymph spaces is greatly facilitated, and from the increased drainage from the part thus afforded, an increased arterial supply of blood is sent to the part, which means an increased metabolism, absorption of the old effusions, a toning up and increased strength of the muscular structures with an increased power of relaxation. When the patient has reached the point where active or resistive movements can be applied, the more definite treatment of the deformity or organic difficulty may be undertaken. The preliminary treatment allows the operator to become thoroughly acquainted with every peculiarity and weakness of his patient, so that a definite and graded system of exercises can be prescribed to suit the exact needs of the patient. To enter into detail and elaborate on the treatment of all the diseases and abnormal conditions where the mechanical therapy can be advantageously used, would require too much time for a busy meeting like this.

In the treatment of sprains the atrophy and limited motion following the usual treatment of fractures, adhesions following abdominal operations, oedemas, back aches, nervous condition, irritable spine, neurasthenic conditions, indigestion, constipation, anaemia and convalescent cases, where a general tonic effect is desired in the treatment of flat foot, bowed legs, drooping shoulder, narrow chest and undeveloped lung capacity, lateral curvature of the spine, with the accompanying tortion of the spinal column, and distortion of the ribs, and a host of other troubles, the value of corrective exercises cannot be overestimated.

Who has not tired of treating constipation with calomel, cascara, or the indicated remedy? For the treatment of this condition I have used a rubber ball filled with shot and weighing from three to seven pounds, rolling it or having the patient roll it about on the abdomen for about fifteen minutes morning and night, and have found it to be of great benefit. The idea was suggested to me by Dr. John P. Sutherland when I was a student.

The use of vibrating machines has been the means of curing this condition where medicine and hygienic treatment alone had utterly failed. The general tonic effect of massage properly given is better than all the liquid tonics we can possibly prescribe for our patients who are anaemic or recovering from a long illness.

This vibrating machine can be used on any part of the body for the treatment of many different conditions. It is an excellent sedative in nervous conditions and insomnia, and can be used for its tonic effect on the muscular walls of the stomach, intestines and bladder. The results are obtained in a natural way by strengthening and stimulating the power given to the organs to remove the abnormal conditions.

Recently a patient, a woman of about thirty-seven years, came to me, complaining of pain in the abdomen, with a pulling or drawing sensation in the right pelvic region, which had persisted since an operation three years ago—a hysterectomy for a uterine fibroid. Almost everything in the line of medical and hygienic treatment had been prescribed, and faithfully carried out by the patient, with but little and temporary relief. A brief course of massage and prescribed exercises has accomplished wonders for her. The drawing or pulling sensation, tenderness and pain has entirely disappeared and I expect a few weeks more of such treatment to complete the cure. Her symptoms were apparently all due to the adhesions following the hysterectomy.

In a case of infantile paralysis in a seven-year-old boy, the son of a physician, there has been a marked increase in muscular development, control and co-ordination, resulting from a carefully planned, though interrupted, course of physical training extending over a period of three years. The boy is now able to use his right hand and shoulder so well in play and work that the old trouble can only be recognized by undressing the boy and making a careful inspection of the two sides.

A very fleshy woman of forty-five years, who had suffered for years from the effects of an irritable spine, back ache and coccyxalgia was entirely cured by a short course (about six weeks) of massage and use of the vibrating machine.

In the treatment of flat foot the application of exercises has accomplished complete and permanent cures. While metal plates will, if properly fitted, generally give relief in a few hours, these plates must, in all bad long standing cases, be worn indefinitely and without curing the abnormal condition. With a soft, flexible support to the arch, which allows of free, normal movements and proper exercises, the condition can be cured in from a few weeks to a few months. The mere relief from pain is not enough in these cases, but an attempt should be made to bring about the normal condition again when all artificial supports may be permanently abandoned.

In certain cases, accompanied by a severe rheumatic condition, with great pain, this may require a much longer time, or cannot be accomplished until the rheumatic condition is recovered from.

A large number of cases might be cited to illustrate the value of corrective exercises when properly prescribed and carried out, but I will mention only one more condition where exercise has produced brilliant results, namely, lateral curvature of the spine, with its accompanying deformities of tortion of the spine and distortion of the ribs. For a number of years I have been accustomed to treating these cases with massage, free exercises, weights and dumb bells, with varying results, varying on the severity of the case and the faithfulness of the patient. The apparatus which you see here was designed, some of it by Dr. Hoffa of Berlin, Dr. Tausch of Munich, and Dr. Schulthess of Zurich, for the treatment of the abnormal curvatures of the spine and accompanying deformities.

In those cases of lateral curvature which are habitual or can be wholly corrected by voluntary effort on the part of the patient, nothing more than a course in general gymnastics is required, when the abnormal curvature can be easily corrected, without giving special attention to the spine. These cases are extremely common and a great many of them are corrected by the exercises received in play and the natural activities of the child, without any help from the attending physician.

In a scoliosis of the second stage or degree it is impossible for the patient to entirely overcome the abnormal curves by standing erect, hanging from a bar, or by lying down. In this stage of the disease we find one or more compensatory curves, that is, if the primary curve is a right dorsal curve, we would find a secondary or compensatory left cervical or dorsal cervical curve and probably a lower or left lumbar curve. In this stage there is more or less fixation of the spine and a marked lack of natural mobility. There are structural changes in the vertebrae and more or less distortion of the ribs.

In the third degree of scoliosis we find these deformities of the second degree greatly increased. There is a permanent fixation, with considerable rotation of the vertebrae, great distortion of the ribs and greatly weakened muscles on the side of the back corresponding to the convexity. We have here to-day a case of scoliosis of the third degree, well marked, with considerable kyphosis. This would be called kyphoscoliosis. This patient has received some attention with free gymnastics adopted to remedy this condition, but the case is so far advanced it will be impossible to do much for him without a specially built machine to increase the flexibility of the spine, improve his gymnastic condition and remedy the condition without too great an expenditure of energy on the part of both the patient and the operator. The best illustration I can give you of the value of corrective exercises is to show you the line of treatment that will be carried out with this patient.

These machines which you see here were imported by Mrs. Blackborne, of the Blackborne Orthopaedic Institute. Mrs. Blackborne will illustrate their use on this patient.

DISCUSSION

FRANK C. RICHARDSON, M. D.: I have not had the good fortune to hear this paper read, but I have witnessed the use of the apparatus. It is along the line of physiological therapeutics, and I believe it is to that form of therapeutics we will have to fly in our doubt and confusion when our homœopathic therapeutics seem to fail, and when the chaotic condition of the so-called old-school therapeutics causes us to look elsewhere for benefit to our patient, we find safety and relief in so-called physiological therapeutics, that form of therapeutics other than drug therapeutics, of which this is a very striking illustration. I do not mean striking in the way of machinery, but I mean this matter of physical exercise.

In regard to the corrective effect of exercises in a physical way I am not so well prepared to speak, although I have the utmost confidence in it. I believe such exercises as we have here enables us to do away with the cumbersome apparatus which is not only useless in a way, but also retards and defeats the very object for which we are striving.

Corrective gymnastics. It is well named. A thing which I do want to mention is another sort of corrective gymnastics that is corrective—that is, the effect of gymnastic exercise upon unstable nervous systems. That has sort of beome my fad. I have only to remind you that there can be no muscular effort without a primary impulse. In other words, every muscular effort must originate in an impulse from a nerve center. Every co-ordinate muscular act must train that nerve center. It is a subject which admits of no end of explanation and exposition. It is sufficient for me to simply hint at it.

I believe that many cases of nervous instability, cases of hysteria and neurasthenia, any case where there is loss of nerve balance, may be best treated by regular, systematic muscular movement. It has been the custom to turn these patients out to grass, as it were, to let them run loose, to play games, to let them exercise as they will, in short, get them as near nature and with as little restraint as possible. It seems to me that that is the worst thing possible for such patients. What they need is training by corrective gymnastics. The nerve centers have been running riot, they have lost their co-ordinate action, they must be taught to do their duty co-ordinately, and the way to do it is by means of the muscles. Now exercise by games, like tennis, foot-ball, base-ball, basket-ball, etc., these things make what I call emergency

calls upon the muscles. That is all right at some future time when the patient is near recovery, but at first I think it is injurious. I think the muscles should be made to act rhythmically by dumb-bells, indian-clubs, etc., and that movements should be so formulated that one movement shall lead naturally to another. I believe that drills should be practiced daily, and if they can be practiced in company, why, so much the better. If they can be practiced to music the rhythm is better secured and maintained and the result is still better. We cannot overestimate the value of such exercises in nervous instability.

I have nothing to say about this paper except commendation. I am sure no one can fail to be convinced of the advantages of such a paper. What I wish especially to call attention to is the cultivation of physiological therapeutics. I think we are apt to neglect them in our practice, and especially in our school. We are prone to rely too largely, I fancy, on our medicines. I think drug action can be greatly enhanced by proper drug methods and proper gymnastics.

FORMALDEHYDE AND ITS THERAPEUTIC USES

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In keeping abreast with the time, to chronicle all that is good and useful in this age of progress, would require more space and time than is allotted to me; therefore in giving you a resumé of all that is new pertaining to formaldehyde, its forms and its uses, I will endeavor to separate, as well as I am able, the wheat from the chaff, giving in addition to that which I am able to cull from my neighbors' deductions, the results of a few tests which I have made for myself or have had made for me. Since the discovery of formaldehyde by Von Hoffman in the year 1867, innumerable tests have been made by many investigators, extending in every direction in an honest endeavor to find the limit to its usefulness, but in the scope encompassed between its use as a disinfectant of space, and the intravenous injection of it for the purpose of disinfecting the human blood stream, a vast number of uses is attributed to it, and we have reason to believe that the end is not yet. Literature abounds in the laudation of this agent is not only a preventive of all zymotic and contagious diseases, but also as a curative agent of the first magnitude. The first field it sought to usurp, and the one in which it has the largest usefulness thus far is that of general disinfection during and following contagious diseases.

Since the admission of the fact that the spread of these diseases could be prevented by the proper use of germicidal agents, strenuous efforts have been continually made to find a substance which would effectually destroy the contagious or infectious element without leaving destruction of property also in its pathway. Not until the generation of formaldehyde gas was made practical and inexpensive has this been accomplished, and at the present time this means of disinfection has practically superseded all others the country, if not the world, over. Sulphur, chlorine and mercuric bichloride have each served us well, and even yet are invaluable and have their own distinct and individual usefulness; but to the new candidate for public favor must be given the palm of popularity because of the simplicity of execution, saving of labor, greater power of penetration, and above all the fact that even the most delicate colorings in wall-paper, decorations, or fabrics are unaffected by it. Many methods have been devised for the generation of formaldehyde gas, and were it not for

the intricate and cumbersome machinery until recently required, this agent would have reached even greater popularity long ere this. These elaborate generators require almost constant attention, and the amount of gas generated varies so greatly as to leave one in doubt as to the real effectiveness of the disinfection. Another difficulty, too, is that sometimes the gas is generated too slowly to be effective. One generator on the market requires the mixture of Formalin (a 40 per cent solution of formaldehyde in water) with glycerine. The gas from this mixture is exceedingly irritating and is so persistent that it requires several hours to rid an apartment of its fumes after being thrown open. Then, too, it damages carpets and furniture by depositing over them a coating which is removed with difficulty. Formaldehyde gas when superheated has greater power of penetration than when cool, but when an endeavor is made to evaporate Formalin by means of a lamp, polymerization is liable to take place in such a way as to inhibit the power of the gas and frequently a highly inflammable sediment is precipitated which adds to the danger of its use in this manner. Any generator dependent upon the incomplete oxidation of wood alcohol is very uncertain, not only in the quantity of gas actually formed, but certain other gases are also thrown off which are quite toxic in their effects, principal among which is carbonic oxide, and there is also danger of explosion and fire from the large quantity of alcohol required. All of these generators are expensive, bulky, and are easily rendered useless by the resulting sediment clogging the tubes. These objections have brought into more common use the 40 per cent solution being sprinkled or sprayed upon sheets which are hung up in the apartment to be disinfected. This method has but little to be said in its favor except that it is the least expensive way yet devised, but here as elsewhere cheapness is by no means the best.

This method is very unscientific for the reason that there is no means of ascertaining the quantity of gas liberated and therefore how can you measure the extent of the disinfection. The temperature of the room would necessarily affect the rapidity of evaporation, and the effects upon the person whose duty it was to do the spraying would be so unpleasant as to possibly cut short the work before it was completed. As before stated cool gas is not so penetrating and effective as that which has been superheated; therefore this method fails to bring out the maximum power of the gas. About one year ago there was brought to my attention formaldehyde in a solidified form which is quite readily reduced to a gaseous state and which, after a series of carefully executed experiments, I am convinced pos-

sesses several distinct advantages over any other form of which I am conversant. The claims made for it by its manufacturers have been amply verified by competent bacteriologists in various parts of the country, and I unhesitatingly recommend it to you from results obtained both in the laboratory and in practical use. The generator used in reducing Leininger's solidified formaldehyde to a gaseous state is simple in the extreme and quite inexpensive. It consists of a small alcohol lamp above which rests a spun copper cup. Into the cup is placed a given quantity of the solidified formaldehyde covering the same with hot water. The lamp is filled with wood or grain alcohol and lighted. The generator is now placed in the center of the room to be disinfected. In large rooms such as halls, school rooms, etc., a number of generators may be used. One ounce of the solidified formaldehyde is all that is necessary to thoroughly disinfect a room 10x10x10, or 1,000 cubic feet, while in using Formalin, ten ounces are necessary under the best conditions for the same space. You can readily see how much more accurate the use of the solidified form must be, for were all the formaldehyde in the solution converted into gas—the solution being 40 per cent in strength—two and one-half ounces of formalin should do the same work as one ounce of solidified formaldehyde, and ten ounces that are actually required. In the use of the solidified form you are positive that a given amount of material will produce a given amount of gas, and when evaporation is complete, not a vestige of sediment remains. The gas has been generated in a superheated state and its strongest disinfecting powers developed. In this form, it being absolutely pure (all impurities having been removed in reducing it to a solid), the gas is much less irritating, and is much less persistent. A room can therefore be occupied hours before one disinfected by other forms of formaldehyde. In my own city—Detroit—this form is used in all of the large hospitals and by the Board of Health, and I have the assurances from all of them that it has given them satisfaction. However, before these institutions placed their orders a careful examination and thorough test was made by the City Chemist and Bacteriologist, W. I. Tibbals, Ph. C., F. C. S., whose permission I have to quote from his report to the health officers. The room selected for the conducting of the tests contained 1,815 cubic feet, with two doors and one window. Only the larger cracks were closed. Two ounces of the solidified formaldehyde were used together with four ounces of water. The time of exposure was six hours. Pieces of thread and cotton were suspended in cultures of the Klebs-Loeffler diphtheritic bacilli, streptococci pyogenes, and staphylococci pyogenes ameus, and then exposed to the

action of the disinfectant, replacing them again in tubes of sterile culture media. Of thirty-six tubes thus treated, only three showed secondary growth and these but slight; thirty-three remaining absolutely sterile after being subjected to incubator temperature for four days. This was an unusually severe test, as the bacteria were in such a concentrated form, whereas in actual practice the bacterial groups are in more or less state of subdivision, and therefore are more readily subjected to the action of any disinfecting material. My own laboratory tests have been quite as satisfactory. In a room 12x9x10, or 1,080 cubic feet, I placed, at different distances from the generator, threads which had been thoroughly soaked in tested cultures of typhoid, diphtheria, and anthrax bacilli, together with tubercular sputum both moist and dried on saucers.

At one end of the room, on a table three feet high, was placed the generator in which was placed one ounce of Leininger's solidified formaldehyde and two ounces of water. The time of exposure was fifteen hours, after which careful tests and examination showed no secondary growth. Repetition of the above verified the results which experience, coupled with that of others in whom I have the greatest confidence, has given me explicit faith in the efficacy of this particular preparation., and together with the ease and simplicity of its use, has led me to use it to the exclusion of all others. We find in Grace Hospital, Detroit, that rooms disinfected with solidified formaldehyde, occupancy may be had in fifteen to twenty minutes after the windows have been opened, while we formerly were compelled to air rooms for several hours after using the 40 per cent solution. It is perhaps unnecessary to suggest to you that the more completely the cracks around windows and doors are closed, the more effective will be the disinfection, and less material will be required. Many, however, overlook this point. Paper should always be pasted around the window sash and door crevices.

During the progress of a contagious disease it is my custom to use formaldehyde every two hours in the sick room by putting a small quantity in the generator and placing it at the furthest point in the room from the patient and lighting the lamp, allowing it to burn as long as the fumes are bearable by the patient. In this way the atmosphere is kept pure and sweet, the contagious element lessened in virility, and I am lead to believe that the beneficial effects upon the patient are very material, and at the same time immunity to a certain extent is conveyed to other members of the household. Physicians having in care contagious diseases can readily disinfect their clothing by placing the various garments in a closet, with the gener-

ator directly under them, and in a short time are again ready for use. The claim has often been made (and I fear many times justly) that the doctor is the cause of the spread of contagious diseases. A cheap, easy, effective method is within your grasp for taking the proper precautions, and you are subject to censure if you fail to avail yourself of it.

The use of formaldehyde as a therapeutic agent by inhalation, per mouth, or injection has its advocates and its enemies. The question is frequently asked, "Does its physiological action have any deleterious effects, and what are they?"

Finnossier, the French physiologist, made an exhaustive observation of its effects upon digestion in this manner: He placed in flasks samples of food, saliva and other digestive fluids with and without formaldehyde. The latter was used in different strengths. His conclusions were that only slight retardation of starchy digestion was manifest, while a more restraining influence was observed upon the digestion of proteids and the coagulation of casein was delayed for twenty minutes as against two minutes without the formaldehyde.

Its use, however, in the indiscriminate preservation of food stuffs, particularly milk and meat, must be condemned emphatically—not on account of any harm the formaldehyde itself might do, but articles unfit for consumption are doctored up by tradesmen and foisted upon the public. The injurious effects produced by impurities (masked by the preservative) are laid at the door of the latter when it is in no way to blame.

It is impossible here to enumerate all of the conditions in which formaldehyde has proven useful, but the field which seems to offer the opportunity of the most brilliant results is the respiratory system. In the treatment of tuberculosis, this agent is a boon to both patient and physician. Frequent inhalation will lessen the cough and expectoration to a remarkable degree. Temperature in these cases is reduced and night sweats stopped. Only sufficient gas should be generated at a time as to make its presence known to the patient by slight smarting of the eyes, and should be repeated several times daily. This treatment, augmented by the indicated remedy, nutritious diet, and all hygienic auxiliaries, will have a great tendency to increase our percentage of cures and bring about an immeasurable degree of comfort to the afflicted ones. Whooping cough, asthma, catarrh, bronchitis, laryngitis and sore throats of all kinds are quickly benefited by inhalation of this gas.

As a one night cold cure, it ranks first. A little novelty in the shape of an inhaler is now on the market containing a small quantity

of solidified formaldehyde. This can be conveniently carried in the pocket of the patient and used at his pleasure.

In gynecological disorders such as vaginatis, endometritis with the accompanying leucorrhoea, douching with a tablespoonful of a 10 per cent solution in a quart of water is efficient. The application of the 10 per cent solution directly to the intrauterine mucosa is beneficial.

A ½ per cent to 1 per cent solution in cases of gonorrhoea in women produces a rapid disappearance of the gonococci—giving one to two vaginal injections daily. In cases of septicaemia, the intravenous injections have proven successful in a number of cases, although a number of failures are on record, and more experience will be necessary to make accurate deductions of its value in these cases. If added to blood outside the body, the corpuscles are destroyed, and the fear has been expressed that a solution sufficiently strong to overcome the army of staphylococci in cases of general blood infection, the blood disintegration would be greater than the human body can stand. This question will have to be settled by further investigation. In the treatment of suppurating surfaces, Scheick's formalin-gelatin powder dusted over the area will inhibit the formation of pus rapidly.

I cannot close this paper without again paying tribute in the form of unstinted praise to that particular form of formaldehyde that has given me such brilliant results both as a disinfectant and as a therapeutic agent, namely, Leininger's solidified formaldehyde, which on account of its purity and unirritating properties should soon become exceedingly popular, and find universal usage.

TRANSACTIONS

OF THE

ALLIED SOCIETIES

TRANSACTIONS

OF THE

FOURTH SESSION

OF THE

SURGICAL AND GYNECOLOGICAL SOCIETY

OF THE

AMERICAN INSTITUTE OF HOMŒOPATHY

HELD AT

BOSTON, MASSACHUSETTS, JUNE 24-26, 1903

CHICAGO
AMERICAN INSTITUTE TRANSACTIONS
1903

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1903

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BUSINESS PROCEEDINGS

The meeting of the Surgical and Gynecological Association was called to order at 2:30 p. m., Wednesday, June 24, President Runnels in the chair. The minutes of the previous meeting were read and approved. The Treasurer's report was presented and referred to an auditing committee consisting of Drs. M. P. Hunt, E. W. Green, and H. E. Beebe, who reported as finding it correct. The report was adopted. A committee of three was appointed to consider a recommendation in regard to the association's relation in the future to the American Institute of Homœopathy; also to consider the matter of reducing the annual dues to one dollar. The Committee was as follows: Drs. C. E. Sawyer, Jas. C. Wood and J. H. McClelland. The Committee reported as follows, which was adopted:

RESOLVED, That this Society hereby merges its organization into that of the AMERICAN INSTITUTE OF HOMŒOPATHY, as provided in its by-laws, under the name of the *Surgical and Gynecological Society of the American Institute of Homœopathy.*

RESOLVED, That we appoint a Publication Committee, with power of strict censorship covering matter for publication in the Institute reports, and that we use our joint influence to strengthen the AMERICAN INSTITUTE as a whole, and to promote the strength, usefulness and influence of the *Surgical and Gynecological Society* on the basis of the new arrangement.

The members of the Committee on President's address were, Drs. N. W. Emerson, DeWitt G. Wilcox and C. E. Walton.

The resignations of Drs. Haywood, Champlin and Bagg were received and accepted. The following names were proposed, and, after being approved by the Board of Censors, were elected—Drs. E. R. Gregg, A. B. VanLoon and H. M. Sanger.

ELECTION OF OFFICERS

The following named officers were elected for the year 1904:

President, W. E. Green, M.D., Little Rock, Ark.; *First Vice-President,* C. E. Sawyer, M. D., Marion, O.; *Second Vice-President,* J. Emmons Briggs, M.D., Boston, Mass.; *Secretary,* J. W. Hassler, M.D., Philadelphia; *Treasurer,* D. P. Maddux, M.D., Chester, Pa.; *Censors,* Nathaniel W. Emerson, M.D., Boston, Mass. (3 years); E. H. Pratt, M.D., Chicago (2 years); E. S. Bailey, M.D., Chicago (1 year).

J. W. HASSLER, *Secretary.*

SURGICAL AND GYNECOLOGICAL SOCIETY
OF THE
AMERICAN INSTITUTE OF HOMŒOPATHY
1903

ADDRESS BY THE PRESIDENT

O. S. RUNNELS, A. M., M. D.
INDIANAPOLIS

OPPORTUNE SURGERY

From the rate of sailing as determined by the log and the course traveled as determined by the compass, the place of starting being known, the sea-captain is able to ascertain his whereabouts on the ocean. In other words, the man at the helm, or on the bridge, in maritime affairs,—the one responsible for the lives of his company and the safety of his ship,—must question every source of information and not only calculate his position, but verify that calculation by observations many times repeated. Without these reckonings the mariner would be lost.

Calculation of this kind is required in every pursuit of life, surgery not excepted. For nothing can be more advantageous to surgery than reckonings as rigid as the mariner's; than scrutinies and questionings the most searching; than cross-examinations of the severest kind. Nothing can do more to establish the surgeon in the equipoise of his judgment, in the rectitude of his course and in the impregnability of his position, than frequent reviews of his work and close analytical studies of its relationship to the great whole of remedial endeavor.

Men are living today who have witnessed the major part of the progress made in science and the arts; who can remember the introductory uses of steam and electricity, and who can relate from observation the mental disturbances occasioned by the great transforming thoughts. At their birth geology had not spoken its expansive word, Darwin had not discovered the pathway of the world's progress through evolution, and science and religion had not learned that their differences were merely misunderstandings; medicine was still chaotic, the revolution inaugurated by Hahnemann was in embryo, and therapeutics without drugs was inconceivable; the relationship of bacteriology and pathogenesis had not been recognized, anæsthesia was unknown, and the achievements of surgery were still unwritten.

But we live in an age of rapid motion. The swift feet of progress have borne us far on the way of acquisition. Vast strides have been made in every department of learning during a hundred years; but in none has knowledge gone forward with greater leaps and bounds than in that of surgery. Ephriam McDowell found surgery limited to fractures, amputations and superficial operations. The noted surgeon then was a good bone-setter, could drop limbs from his saw with great celerity, could tie the carotid and subclavian arteries, and made boast that the ever-present pus in his wounds was "laudable."

All surgical knowledge has come through the process of education; it has been a growth from primitive beginnings; an evolution from ignorance of conditions and clumsy methods to an accurate diagnosis and a finished technique. It has been a tuition as to when and how to be serviceable.

Surgery is an outgrowth of medicine. It is the recognition of the limitations of medicinal therapeutics. It is the alleviation or removal by manual intervention of physical conditions otherwise unrelievable. It is, therefore, the supplement and the complement of the healing art.

Such a thing as antagonism between medicine and surgery is illogical, inasmuch as each is the servant of the other and both are joined in the accomplishment of a complete work. In the untutored stage of our science, however, the lines were not accurately drawn, and confusion as to definitions prevailed. Drug therapeutics attempted the impossible in numberless instances, and continued its futile ministrations till the possibility of deliverance by manual intervention had passed. On the other hand, surgery frequently was employed prematurely or unskilfully to the detriment of its subject. All such practices must be regarded now as rudimentary.

Today the boundaries of medicinal-therapeutics and of surgery are better defined. Physicians have gained more accurate knowledge concerning what can and what cannot be accomplished by drugs, and have realized to a keener extent the value of the time-element in the surgical case. Surgeons have learned when their services can be of the greatest value, and have perfected their methods to such a degree as to banish from their work, to a large extent, the element of danger. They have acquired the knowledge from defeats, as well as from victories, that postponed surgery is the hazardous surgery; and that the danger is usually in inverse ratio to the square of the distance from the inception of the conditions demanding it. They have found, alas, in too many instances, that procrastination has been irreparable loss of time; that recovery would have been assured if the surgical remedy had been applied opportunely, and that the most opportune

time for such service is when the first nature-signal for manual help is made, and as soon as the powerlessness of medicinal therapeutics is determined. Up-to-date knowledge demands that the resort to surgery shall be made before cellular pathology has become widespread; or before the metamorphosis has extended far into local death or into malignant proliferation. Experience has demonstrated that all delay of surgical action, for instance, until the stage of pus-formation is entered upon in appendicitis; or until gangrene or peritonitis has been generated; or until abnormal growth has shown persistent and steady development into hopeless malignancy, is in disregard of the plainest teachings, and is an ever-increasing menace to the welfare of the patient.

SPECIFICATIONS

The one surgical disease that looms above all others, and that is assuming more and more gigantic proportions, is cancer. Mankind is appalled at the rapid pro-rata increase of this disease. Never before has cancer exhibited such widespread prevalence, never before have the resources of the healing-art been put to such severe test. It is not only the more frequent appearance of the disease that is terrifying, but also its dogged pertinacity and apparent incurability. Is is to be wondered at that many of its victims reach a state of mind bordering upon hopelessness? And that they employ expectancy, or the "catching at straws," in the trial of one "sure cure" after another, till the end is reached? I confess that admission may as well be made that after the given case has passed a certain stage of development, it is not very material what is done or what is left undone, so far as the result is concerned. It is the delayed case of cancer—the one with lymphatics infected by the proliferation of cancer-cells—that proves to be incurable.

It is these cases that have brought opprobrium alike to the physician's medication and the surgeon's knife; and have led in many instances to the layman's belief that the "knife," so-called, is a bad thing in the treatment of cancer, and that it perpetuates, rather than obliterates, the disease. But such experiences merely emphasize the futility of eleventh-hour work; at which time all methods of cure are powerless alike to avert the certain doom.

Cancer can be ruled out in two ways: first by prevention, and second by opportune extirpation. If all causation of physical deterioration be annihilated; if nagging irritation of the sympathetic nervous-system be countermanded at the beginning, and the physical tone—the battle-power of the individual—be kept at the maximum, such an exhibition as cancer, or any other chronic disease, would be a rarity

indeed. For chronic disease is found only upon the individual of low vitality. It comes only when the life-forces are impaired; when there has been a decline from the normal for an indefinite time; and when the powers of resistance are inadequate for continued defense.

The first work of the physician is to ascertain whether the causation of the malady be still operative—not forgetting that impairment of vitality may go on for years without the recognition of the patient. Rigid examination of every individual, to ascertain life-soundness, should be made at frequent ntervals. There should be assurance, oft-repeated, that the major organs of the body are in a state of healthful exercise; that glands and lymphatics and integument are free from morbid expressions, and that there is no such thing going on as gradual exhaustion of life-energy.

The most opportune service in any case of physical decline, therefore, is the service that shall abate the causative factor at the beginning. It is the early intervention that shall free the sympathetic nervous-system from every irritation and incubus. It is that performance, seemingly unimportant, but of immeasurable value, that shall relieve eye-strain; abate nasal impedimenta; discontinue adenoid growths; do away with troublesome teeth; and rule out adhesions of prepuce and clitoris, stenoses and irritable sphincters, hæmorrhoids and cicatricial formations. Opportune attentions of this sort may make all the difference between health and disease. Such foresight will effect the cure by prevention, not only of cancer, but of other chronic ailments as well.

The second way to annul cancer is to extirpate every tumor-growth that makes its appearance. Let there be no delay for exact definition as to the nature of the growth. If the tumor or vegetation be benign, no harm can result from its immediate removal; but if it be malignant, the disease may reach incurability by the delay of a day. At the inception, the disease is merely an impairment of normal cell-activity; the cell-change is that incidental only to embarrassment of normal action, an erosion or an induration, representing merely a high degree of cell-proliferation, and, not yet, epithelioma of carcinoma. The histology may still have the characteristics of the normal—when all the cells are found to occupy their splendid isolation—each a thing by itself—and not broken and grouped in nests of promiscuity. They are then intact and competent to perform their healthful functions of sensation, nutrition, reproduction and automatic or spontaneous action; but when normal action is perverted, and the boundaries are disregarded—trabeculæ are formed, and peculiar cells in nests and nodules are generated in the stroma of the tissue. When this change takes place, the transformation into malignancy occurs, and carcinoma, or one of its congeners, is a veritable fact.

The proper way to treat such morbidity, I repeat, is to treat it surgically; if possible, before the evolution into malignancy has taken place, and certainly before the infection of the lymphatics has occurred. This should be done at that early day when degeneracy is at the initial, and when a miracle is not demanded to save the life. Not only should root and branch extirpation be effected at that opportune time, but in every case rigid search should be made for the causative factor. The surgeon's duty is never done till all nerve-irritation and physical burden is discovered and discontinued. This is the *Alpha* and the *Omega* of the doctor's business. It is the thing to look for in the supposedly "healthy," as well as in the one making chronic complaint, if degenerations are to be averted, and if the physical defense is to be reclaimed and maintained.

The next disease of pre-eminence requiring surgical intervention is idiopathic peritonitis. In strict parlance, however, there can be no such evolution as idiopathic peritonitis, or peritonitis without cause. Peritonitis is due to sepsis. The septic material is poured out upon the peritoneum almost invariably through a pathological or accidental orifice of intestine, gall-bladder, Fallopian tube, or contiguous abscess. Again, it may follow the local paresis of intestine due to trauma or strangulation, in which case infection of the peritoneum is by transmigration of bacteria through devitalized tissues. Peritonitis, therefore, signifies infection of the peritoneum. The great questions are, Whence comes it? and, How shall it be combated? If the sepsis has proceeded from a perforation of intestine made by typhoid ulceration, or by gunshot, or by an appendix degeneration, the requirements necessitate immediate surgical repair, or removal, with adequate disinfection of the peritoneal cavity. Perforation from whatever cause demands surgical intervention, if death—with very rare exceptions—is to be averted.

Operative results in cases of typhoid perforation are at this date encouraging. Many, thus endangered, have been saved by surgery, and the percentage of cures, it is believed, can be increased by earlier intervention and riper experience. In the case of intestinal bullet-holes, the demand for immediate closure is imperative. Bullets, it is true, have penetrated the abdominal parieties without perforating the intestines, but it is wholly unsafe to count upon such a rare occurrence. The exploratory operation and accurate determination of the fact is by all odds the safer procedure, and is commendatory from every viewpoint.

Perforation of the appendix vermiformis makes as insistent requirement as does the gunshot wound itself. The prompt removal of an appendage with a spouting orifice has no contraindication. If one

always could tell when perforation of appendix occurs, or when the leak of sepsis begins, it would be a great desideratum; but, unfortunately, the exact time of such an occurrence is usually shrouded in mystery. Experience has proved in numberless cases that perforation had taken place hours or days before the exploration was made. There was present then suppurative peritonitis, pus-pockets or widespread inflammatory adhesions, indicating that nature had waged a strenuous, but losing, battle. It is evident that perils intensify and hazards multiply by every hour of procrastination in such a case. Let it never be forgotten that sepsis is doing its destructive work from the onset of every case of appendix-inflammation, and that whether perforation or gangrene has occurred as yet or not, the local anatomy is undergoing retrograde metamorphosis, and the life conditions are being rendered complex to an unknown extent. Fortunate, indeed, it is, if surgical intervention be permitted before the field has been strewn with pathogenic bacteria, and while yet an aseptic operation is possible and a speedy cure obtainable. Such opportune service will rescue the treatment of appendicitis from the opprobrium now so justly merited in all maltreated cases.

The evolution of the correct treatment of delayed and extra-hazardous cases of appendix peritonitis has been going forward rapidly and has attained such standing as to exercise indisputable authority. While there can be no longer question as to the requirement for the removal of the appendix at the inception of its embarrassment, the teaching is none the less mandatory for immediate surgical intervention at every stage of the pathology, short of the moribund. Once it was considered classical treatment to wait, in all well-developed cases of appendicitis, and especially in all advanced cases, till the fury of the storm had abated—till the "interval" following the attack had been entered upon—in order, as it was supposed, that more ideal operative conditions could be had and that greater safety could be insured. But the argument thus made has been discounted, and safer counsels have prevailed. Instead of helplessly drifting with eyes blindfolded and hands helpless, whithersoever the mad waves of a pathological tempest would impel its victim, the surgery of to-day insists upon attempting to keep the ship in hand, to man the rudder, and by help of compass and log to direct its course. If the case of appendicitis be not already moribund, and if it does not show a measurable progress from bad to better as the hours go by, expectant treatment is no longer justifiable and the surgeon's services are peremptory. Without ocular evidence, at no time during the progress of such a case till resolution is established, can there be any assurance of security whatever. No one

can be certain that the evolution will be for the good; or that appalling danger is not portending; or that an extra-perilous process has not already been inaugurated. Regardless of the fact that many cases tide over from one attack to another, and patients are lulled into a sense of security by optimistic assertions, the fact remains that no appendix having a history of embarrassment is ever safe, and that it may at any time let go a volume of sepsis that may destroy life inevitably. Experiences at the operating-table have convinced every onlooker that expectant treatment, however administered, without adequate response, and in the face of an evolution, hour after hour from bad to worse, is malpractice of the rankest order—and is wholly without grounds for excuse.

Observations of this kind, it is, that have ripened our conclusions into the certainty that appendicitis is a surgical disease *de novo;* that the ideal time for operation is at the beginning of or before advanced retrograde metamorphosis has taken place; and that even then, and at every stage of the degeneracy prior to the descent of the physical rapids precedent to dissolution, the surgical remedy is the only logical remedy.

Surgical intervention has acquired supremacy, also, in tubercular peritonitis. For there can be no moot questions, no diversity of opinion, with regard to the treatment of this desperate disease. Surgery is the only remedy at any stage of the evolution that can give any promise of cure. But, again, and always, the potency of the surgical remedy is dependent upon the date of its administration. Last-resort work is always a sort of Hobson's choice—the best endeavor possible under the circumstances, but ideal in no sense. From 30 per cent. to 40 per cent of recoveries, after surgically treated tubercular peritonitis, in the earlier days of the service, was considered great achievement, and just that much pure gain, inasmuch as it was at that time 100 per cent fatality under any other mode of procedure.

Here, too, the logic of experience has been a great schoolmaster. Formerly, the diagnosis of this disease was made almost wholly by accident, and as the result of exploration in the pursuit of other object. When the rule shall be universally followed that all intra-abdominal conditions manifesting obscurity and any marked degree of obstinacy, under well-directed curative effort, shall have the benefit of exploratory surgical operation, the diagnosis will be made at the inception of the disease and the possibility, as well as the probability of its cure, correspondingly enhanced. For it has been found that surgical intervention, at or about the time of the beginning of this otherwise incurable disease, has been crowned almost invariably with its banishment.

It is very instructive to note the interdependence and relationship of disease processes—the sequences and chain of dependencies so often traceable. In taking the backward trail of the pathology in question, and tracking the tuberculosis to its lair or starting-point, I have gained in many instances startling information. Frequently, there has come an illumination of a complex problem that not only made its solution easy and the course of procedure plain, but has dispelled misconceptions and delusions that had previously been entertained as facts.

The journey is always back to causation,—for cause and effect are correlative. If peripheral causation be non-operative,—if there be no superficial or visible reason for the decline to bankruptcy in the given case,—the search must be extended to the interior; for there must be, there is somewhere, a reason for the ill-exhibition under consideration. Any peritoneal tubercular degeneration is a great interpreter. In a large percentage of cases, the disease has proceeded from that vestige of anatomy called the appendix vermiformis. The hapless victim, with or without knowledge of long embarrassment in this region, has drifted from one attack of appendix difficulty to another, with never, at any time, the possession of an appendage otherwise than sick and feeble and non-competent and badly fed. Malnutrition is always true of the appendix, even in the state of its utmost vigor and of its utmost quiescence. There is never a time when vitality at full tide can be predicated of it. It is what may be termed a choked intestine, an undrained canal or a damaged lagoon. Clearance, freedom of flow and an outgoing current, bearing with it the putrefactive sewage of a Chicago river, are not characteristic of it. With sanitation thus bad, what wonder is it that acute and chronic maladies are referable to it; that multiform interferences with the normal exercises of contiguous organs and tissues are occasioned by it, and that its possessor may never know what it is to be vigorous and forceful to the maximum of good health for an entire lifetime, or until the date of its extirpation. I say that low vitality, exhausted energy and inefficient battle-power are the prerequisites for the cultivation of the tubercle bacillus; that tuberculosis is never found under other conditions, and that the peritoneal variety is a local affair dependent for exciting cause upon an intraperitoneal situation that fulfills all the conditions. In proof of which I need only to instance the facts that degenerate ovaries, that lax ligaments of uterus and kidneys, that gall-stone complications and alimentary embarrassments, as well as tuberculosis and carcinoma of peritoneum and intestines, are very closely associated with, and often the result of, the hampered physiology, and the latent pathology always present in the appendix.

I must crave your pardon for much reference to a theme so long considered trite, for an impressment of your minds to a further consideration of a question so long discussed; but I am persuaded that no subject before us is more expansive and far-reaching, or is more pregnant with woe to our race, both directly and indirectly, than the appendix question, and that it must have hearing until there shall be universal acquirement of knowledge concerning the *rôle* played by it in pathogenesis.

Another very pat example of the opportuneness of surgery is the cure of Bright's disease by the decapsulation of the kidney. But cure by Edebohls' operation is dependent, again, upon its early utilization. The reclamation of an organ must depend upon the extent of its disintegration. Failures to cure by this method have resulted only when applied in far-advanced cases.

As to ectopic gestation, adhesive bands, bowel obstruction, gallstones, the empyemas, etc., I need not detain you. It is unnecessary for me to prolong the recital or to instance further the need and opportuneness of early surgery.

From what has preceded, the lesson is clear that no surgery can be considered opportune that does not effect the removal of all solid and cystic growths at their beginning; that does not penetrate and evacuate all pus-collections at their earliest formation; that does not obliterate a hernial sac before strangulation occurs, or the hernial orifice has become hopelessly dilated; that does not remove every nagging peripheral irritant before its presence has been announced by long-continued discomfort and before depreciation of the physical capital has been effected thereby; and that does not, at the inception of every obscure or persistent intra-abdominal abnormality, make open proof of the exact status.

The lesson of all experience is summed up in the proposition that any surgery that is worth doing at all is worth doing early.

Living, as we do, at the zenith of the world's light, it is obligatory upon us to acknowledge our indebtedness to those who have preceded us; to make intelligent use of the fund of information in our possession, and to realize that evolution is progressive and interminable. To do this acceptably, we must put ourselves into a judicial frame of mind; must have ability to weigh fairly and estimate justly the advantages and the disadvantages of every departure from the beaten track, and be sensitive always to the messages that are being sent continually to the children of men. For revelation is not closed. Never have seers and prophets been as plentiful as now; never before have men been in closer communion with the Powers that Be than at the present time; never in history have the five senses of man been as receptive to the meaning of things as in our own day.

AMPUTATION OF THE BODY OF THE UTERUS FOR THE CURE OF INTRACTABLE FLEXIONS

BY W. E. GREEN, M. D.,
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There is, probably, no class of diseases peculiar to women that taxes the ingenuity and skill of the gynæcologist as does that of flexions of the uterus. Every conceivable form of mechanical support has been manufactured for their relief and many operations devised for their cure, all of which have, more or less, failed in results.

The pathological changes that are more or less responsible for uterine flexion are superinduced by arrest of development of the organ. This may occur during intra-uterine life, in infancy or at pubescence.

In the first instance the condition is designated rudimentary, in the second infantile, and in the third pubescent uterus. The rudimentary form is often associated with absence of the vagina or ovaries, and is usually non-functional; however, when the ovaries are sufficiently developed, there may be a painful effort at menstruation which, at times, causes such severe suffering that castration may be required.

The infantile uterus is generally disproportionately developed; there is either an intra- or a supravaginal elongation of the cervix with attenuated walls, while the body is abnormally small. The ovarian growth is also usually more or less impaired. The menstrual flow, under such faulty conditions, is generally scanty, irregular in periodicity and painful. Sterility is the rule. This may be owing to imperfect ovarian function or to deficient uterine development.

Of these forms of undeveloped uteri, the pubescent occurs most frequently, and its pathology is the most complicated. Neither the body nor the cervix are perfectly developed; they are usually undersized, and in almost every instance a sharp anteflexion exists. While in the beginning of menstrual life the flow, though irregular, is painless, a process of pathological evolution soon begins, and consequent pain and suffering develops which, sooner or later, drives the subject into the hands of the surgeon. This poorly-developed organ is deficient in all its appointments. Its muscular structure and its ligaments are not sufficiently strong to hold it erect, therefore flexion occurs. The circulation is wanting in tonicity, and consequent stagnation and congestion gradually supervene. The nerve-supply is hypersensitive, and pain soon tortures the subject. The cervical canal, naturally small, is made narrower by flexion, and the endometritis, which usually exists,

adds to the obstruction by the swollen condition of the mucous membrance. All of these abnormal conditions tend to produce perversion of function. Drainage of the uterine cavity is imperfect; the venous circulation becomes engorged or congested; congestion invites inflammation, and inflammatory overgrowth of the body of the uterus gradually supervenes; this enlargement increases the flexion and displacement, and the efforts of the uterus to expel the menstrual fluid through the occluded cervical canal also adds to the size of the organ, until it will measure two-and-a-half, three and even four inches in depth. With this hypertrophy and venous stagnation comes leucorrhœa, profuse menstruation and increased pain. While an examination of the organ at this stage reveals an enlarged body and elongation of the supravaginal neck, the infravaginal portion retains its original smallness. The novice in making an examination in such cases, seeing the miniature cervix, is surprised when passing the sound to find it entering the organ to a depth of three, three-and-a-half or four inches. The position of the uterus sometimes alternates between ante- and retroflexion; and the surgeon is, at times, greatly annoyed in some of these cases, after having operated for a retroflexion, to find that within a short time the body of the organ has tumbled forward, developing a new train of symptoms equally as annoying and painful as were those that existed before the operation.

I had a most unpleasant experience of this kind about two years ago. I operated upon a women of prominence for a retroflexion of the uterus and prolapsus of an ovary. The cervix was diminutive and elongated, while the body was large. The patient had suffered for years from all the symptoms peculiar to pubescent uterus. I opened the abdomen, resected both ovaries (they were cystically enlarged), did a suspension of the uterus, and removed the appendix as well. She recovered very nicely and did well for a few months, when she began to suffer from symptoms of anteflexion, viz., irritation of bladder, heaviness, bearing-down pains and pelvic soreness. An examination showed that the uterus, while reduced in size, was lying forward under the pubes in an extreme state of anteflexion. She was confined to her bed for weeks and her suffering was severe. She would not submit to another operation that I recommended for relief, but lost confidence in me and passed into other hands for treatment.

The etiology of pubescent uterus is often obscure, but the most frequent cause is confinement and close application to study during the pubescent age; severe sickness, chlorosis, overwork, unsanitary surroundings and insufficient and poor quality of food are also factors in the production of the conditions.

The ordinary treatment of flexions of the uterus is so well given in all the text-books on gynæcology, that it would be an unpardonable trespass upon your time for me to recite it here; in fact, it was not my intention in writing this paper to do more than describe an operation (amputation of the body of the uterus), which I first performed more than two years ago for the relief of anteflextion of an aggravated type. I have since this time demonstrated that the procedure is just as applicable to cases of retroversion that are not amenable to adopted methods, as it is to anteflexion. In selected cases, with a healthy cervix, where radical measures become necessary, in order to give relief in intractable flexions, I consider this procedure far superior to vaginal hysterectomy. In this operation the surgeon has an opportunity to examine and deal conservatively with the ovaries and other viscera. The vagina is left in a natural condition, and the broad ligaments that are united to either angle of the cervical stump elevate the vaginal vault and support the pelvic viscera. I cannot do better in describing the operation than to recite my first case.

Mrs. ———, æt. 35; brunette; slender; of medium height; consulted me in January, 1901, giving the following history: Was delicate as a child; began menstruating between 13 and 14 years. At first the flow, scant, was attended the first half day with pains in lower abdomen, also in back, which lasted throughout the period. The suffering gradually grew worse and the flow more profuse, until, at the age of 20, it lasted for seven or eight days, and the suffering was so great that medical aid was summoned. A diagnosis of endometritis and stenosis, caused by anteflexion, was made, and the womb dilated and curetted. This gave relief for a while, but the pains soon returned and gradually grew worse in every way. The uterus was low down, the body pressing against the bladder, creating much vesical irritation, backache and constant bearing-down. The menstrual period came on every three weeks and lasted sometimes ten to fourteen days. She suffered constantly from headache and pain in region of ovary. Had been in the hospital several times, and undergone almost every kind of treatment by various physicians. For the last few years she has been an invalid, both in mind and body, being very nervous and confined to bed much of the time. She was married at 25; husband died at the expiration of four years; was never pregnant.

An examination revealed a small vagina, uterus prolapsed and severely anteflexed; vaginal portion of cervix small; supravaginal elongated; body large, three-and-a-half inches in depth, and crowded well down under pubic, pressing heavily against the bladder; both ovaries were enlarged and cystic. Patient was sent to hospital; uterus dilated,

curetted and packed, and rectum operated for hæmorrhoids. One month after recovery she was put upon galvanism, both intra-uterine and vaginal. This was continued, in conjunction with internal medication and medicated tampons, for three months without material benefit. At the expiration of this time the patient was thoroughly discouraged, and I was not inclined to further treat the case other than surgical. She had come a long distance to see me, from another state, and was loth to return home unimproved, therefore she readily consented to the measures which I advised, with almost positive assurance of relief. She was again returned to the hospital and subjected to the following operative procedure: The abdomen was opened and both ovaries, which were cystically enlarged, and tubes were removed. The body of the uterus, which, as before stated, was hypertrophied and anteflexed, was amputated just above the internal os. After closing the peritoneal rents in the broad ligament the several ends on either side were drawn down and sewed into the corresponding angle of the cervical stump, after which it (the stump) was closed over with peritoneum in the usual way. This served to lift the cervical stump well up and gave good support to the pelvic viscera. The appendix, which was diseased—chronic interstitial appendicitis—was also removed. The patient made an uninterrupted recovery from the operation and left the hospital in five weeks. She rapidly improved in health and wrote me at the expiration of six months that she was strong and well, and was able to attend to all her household duties, a thing she had not been able to do before for years. I saw her recently and she had gained twenty pounds in flesh, looked fully ten years younger than before the operation. She stated that she was perfectly well in every way, was cheerful and happy and worked hard every day.

An examination, per vaginam, showed the vaginal vault still to be well sustained in an elevated position.

DISCUSSION

J. M. Lee, M. D.: I suppose that is undoubtedly the proper treatment for patients who have passed the menopause, but if you have to deal with a young lady in every way marriageable, perhaps engaged, then what should be the proper course to pursue? Surely, we should strive to avoid any operative measures, whatever, that would render sterile. In anteflexions of the kind referred to in the paper could we not cut down the posterior lip, which looks directly upward toward the bladder, in such a manner as to straighten the canal? I am of the opinion that such treatment as this would be indicated in patients who have not yet passed the menopause, but in the case reported in the paper it, perhaps, would not be the correct method.

J. H. CARMICHAEL, M. D.: I expected someone would object to Dr. Green's treatment of these cases from a general standpoint, for I was taught to believe that ante-flexion is the normal position of a healthy uterus. In our operations for the correction of deviations of the uterus we should, and do, try to produce just this condition that Dr. Green, from the title of his paper, would lead us to infer is a pathological condition. If the doctor had cited this case as one entitled "A Clinical Case" I should have agreed that his treatment was judicious, inasmuch as the treatment instituted cured the case. But Dr. Green gave out his title as "Removal of the Body of the Uterus for Extreme Ante-flexion." This title would lead many of our over-anxious surgeons to do just what Dr. Green intimates by his title, and they would cite his case as a precedent, and it is this very reason why I am an objector to the title of the paper, while I am not objecting to the manner in which Dr. Green handled his case. If Dr. Green will pardon me, I would diagnose his case as one of neurasthenia, and as he admits diseased ovaries and an appendix I can readily understand that by removal of these pathological tissues his patient recovered, and not because he removed the body of the uterus. Many of our gynæcologists to-day think best to remove the womb if they are obliged to remove the appendages. Dr. Green may be one of them. In cases of stenosis caused by extreme flexions my rule is to perform radical divulsion, which will cure an obstructive dysmenorrhœa, but if the painful menses returns after the extreme dilatation it is not caused by the stenoses, and one must look elsewhere for the irregularity.

C. E. SAWYER, M. D.: I regret that I was not present to listen to Dr. Green's paper. This paper certainly contains some very good suggestions, and such as are well worth following. I am sure there are many cases in which the operation of amputation in ante-flexion is a commendable procedure.

There is one point in this paper that is especially interesting to me, and that is the matter of diagnosis. One of the most deceptive things that we find in cases of ante-flexion, and especially in ante-flexion with hypertrophy of the body, is dysmenorrhœa. This is the special point to emphasize in Dr. Green's paper. The whole question in such cases as he relates is one of mal-nutrition, and consequently a consideration of what ought to be done in these cases before surgical measures are undertaken is of much importance. I am sure that much can be done for such patients in other ways than by surgery, and more conservative lines should always be followed when possible; but when the condition has become like that mentioned in Dr. Green's case, where there is a marked increase in the cavity of the womb, the size of the body is increased, and the tubes and ovaries are also affected, such surgical measures as he proposes are certainly warranted.

I doubt very much if an ante-flexion will produce stenosis sufficient to cause dysmenorrhœa. I have learned long since that the normal canal of the uterus is very small, and that the normal menstrual discharge passes through a very small cavity, therefore the pressure must necessarily be very great from any mal-position before obstruction results.

My mode of treating this class of cases is to take them early, correct their habits of living, going into the details of life thoroughly and carefully; to build up their constitutional forces; to change the local circulation and to improve the strength and vigor of the parts by means of massage, electropathic and hydropathic measures, etc. The use of a good pack applied regularly and for protracted periods is of great value in all cases of this sort. Anything which influences either local or general nutritive forces is to be considered. If we are to rely upon medicine we find the field very limited indeed. We must use measures which influence the circulation, improve nutrition and strengthen and supply the parts.

In all cases of ante-flexion, whether of great or small degree, all of the conservative conditions should be taken into consideration and conservative means used first, before they are relegated to surgical procedure. This is certainly a commendable paper in every way. It shows that from the results obtained the homœopathic surgeon is in the advance in operative procedure, and that Dr. Green is one of the leaders in his line, and is to be congratulated both for his skill and his success.

J. H. CARMICHAEL, M. D.: I merely want to call attention to the remarks of Dr. Carmichael in discussing this paper, relating to dilatation of the cervix in cases of dysmenorrhea. This procedure does good sometimes, and, again, it does not. The great troubles lies in the fact that the condition for which dilatation is used is relieved for a period of one or two months, but they almost invariably relapse, and the treatment can not be relied on to give permanent results.

WM. E. GREEN, M. D.: I merely wish to comment upon the remarks of Dr. Lee and Dr. Carmichael. But first, I want to thank Dr. Sawyer for the very lucid manner in which he sustained my ideas of the pathology of this condition that my paper deals with. This paper dealt with an extreme degree of flexion, one that bears with it a peculiar pathology, a pathology that renders the conditions not susceptible to ordinary measures. I stated in my paper that the tissues of that cervix were not strong enough to sustain the uterus, even had it been properly replaced; that the cervix was unduly elongated, slender, and that it lacked tone. If you place such a womb in position and prop it up, it will not stay there for any length of time unless you can improve the nutrition, but will tumble over again. In such case, if you have retro-flexion and correct it with suspension, as soon as you have an elongation of this support the uterus will topple over, either forward or backward.

These cases are neurasthenics; they are born with impoverished organs, and anv injury, ever so slight, will give them pain. They have neuralgias; have stomach troubles; have all forms of neurotic conditions. They do all kinds of irrational things; some go crazy. That is the class of cases I am dealing with in this paper. Women who do not bear children, as a general thing, that do nothing but suffer until they have passed the menopause, or these organs are removed, and the sooner they are removed the better.

In regard to Dr. Carmichael's remarks: I stated that this case had been under the hands of many physicians; had been curetted and dilated time and time again; she had had electricity; had massage; had all forms of treatment, and she had reached the age of thirty-five, and yet that uterus still persisted in bothering her. I had given my best efforts for three months to relieve, and had failed; and it had reached the point where either a vaginal hysterectomy or amputation of the body of the uterus was to be performed. I decided upon amputation, and am satisfied that I left her in a far better condition than if I had removed the entire organ.

The question presenting itself is this: Is it worth while to do suspension of these enlarged organs in this class of cases? No, it is not! It demands that they should be taken out entirely, or that only a part of them, as indicated in my paper, be left. In some cases one ovary may be left, or part of an ovary, which will maintain the womanly traits of the subject. The sexual function will remain undisturbed. She will menstruate some, probably not to a normal degree, and will be left in a better condition every way than if a hysterectomy had been done.

THE TREATMENT OF FRACTURES OF THE ELBOW-JOINT AND THEIR COMPLICATIONS

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I have decided to write upon a theme entirely devoid of the glamour which surrounds brilliant surgical achievements; to consider a class of cases as perplexing and difficult to treat as any which come under the care of the surgeon, where excellent results are invariably expected but difficult to obtain, and concerning which an element of uncertainty must always exist.

During the past few years I have treated quite a number of patients who have sustained complicated fractures of the elbow joint; some, although the character of the injury portended serious loss of function, have obtained excellent results. In others the outcome has been somewhat unsatisfactory.

Fractures of the elbow joint may be classified as follows:

1. Fractures of the internal condyle.
2. Fractures of the external condyle.
3. Fractures of the olecranon process of the ulna.
4. Fractures of the lower end of the humerus.
5. T fracture of the elbow joint.

DIAGNOSIS

In any fracture of the elbow a few hours after the injury has occurred there will be swelling of the soft part, restricted motion, or loss of function, and pain increased by movement of the joint. These are uniform symptoms which are to be found in every case of severe injury to the joint, but they do not necessarily indicate fracture. A sprain or dislocation might produce these same symptoms.

In examining a patient for a suspected fracture of the elbow joint there are certain points which must be kept in mind. In the first place it is essential to carefully examine the uninjured elbow and compare the injured with the healthy side, making due allowance for the swelling which is present. If this is not too great and you are able to palpate the bony prominences and make them out quite distinctly, a fracture should not be overlooked. Unfortunately swelling is usually present, at times so marked that it is quite impossible to differentiate the structures beneath, yet by firm, continuous pressure the bone can usually be outlined. A point of great sensitiveness or a localized area of echymosis often directs our attention to the exact location of the fracture.

Each bony prominence should be grasped between the forefinger and the thumb and an attempt made to determine whether crepitation can be produced. At the same time the forearm should be alternately extended and flexed. At extreme tension there should be no lateral motion in the elbow joint; comparative measurements should be made of the distance between the two condyles and between the acromion process and the external condyle.

A preliminary examination should be made without an anæsthetic if the patient will permit of it, as points of greatest sensitiveness and the exact motion which causes the greatest pain can only be determined while the patient is conscious.

CASE I. SHOWING RESECTED ELBOW-JOINT.

An anæsthetic should be administered in every case of suspected fracture of the elbow joint unless decidedly counter-indicated by the patient's general condition. Without it mistakes in diagnosis and subsequent treatment are bound to occur. Only with the patient completely relaxed is a thorough examination possible; then with passive motion and firm pressure upon the several bony prominences crepitation can be made out if it exists.

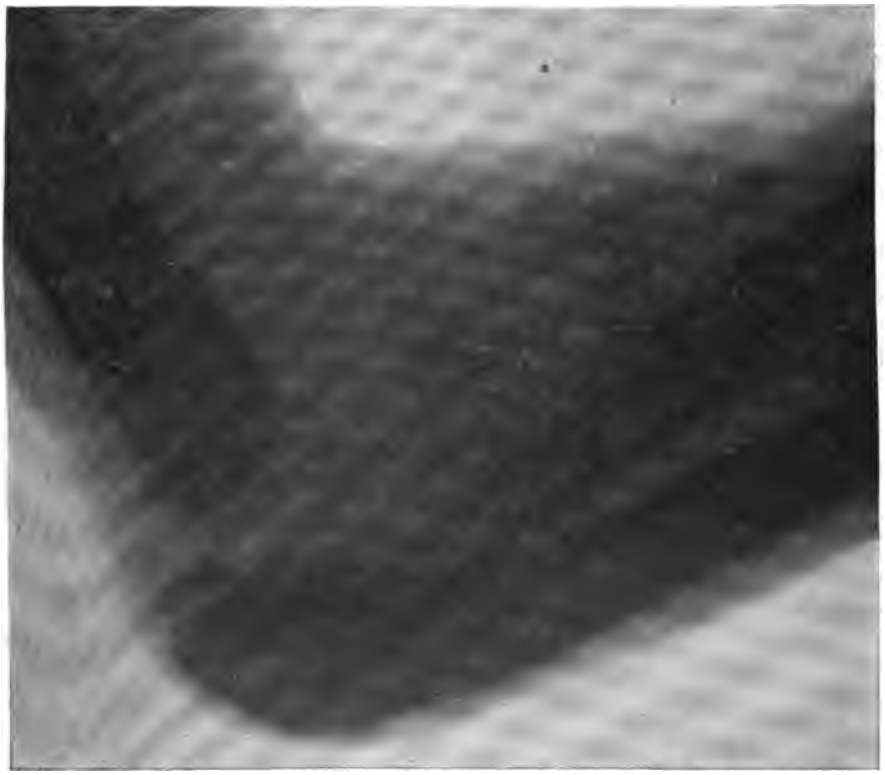
The Roentgen ray should be employed in every case of fracture when possible. Inspection with the fluoroscope is only practical in certain cases, while the skiagraph offers not only accurate information but a permanent record of the case. The physician who neglects the

use of the X ray in cases of fracture, or where there is a suspicion of one, is derelict in his obligation to his patient.

I wish now to consider very briefly the features to be observed in the special fractures above enumerated.

Fracture of the internal condyle.

Swelling will be considerable over the condyle, crepitation between the fragment and the shaft of the bone is present, lateral motion can



CASE II. RESECTED ELBOW-JOINT.

be detected in the elbow joint, the area of echymosis over the internal condyle may be somewhat circumscribed.

Fracture of the external condyle.

Crepitation and abnormal lateral mobility of the joint, a disturbed relation of the bony landmarks, resulting in an upward displacement of the external condyle, with an increase in the distance between the tip of the external condyle and the olecranon process will be the chief diagnostic signs of the fracture of the external condyle.

Fracture of the olecranon process.

The relation of the bony prominences will be undisturbed laterally. The examining finger will detect a depression near the base of the olecranon process. If the fracture is complete the contraction of the triceps muscle will cause a wide separation of the fragments when the arm is flexed. Crepitation and perhaps mobility of the olecranon process will be present, with considerable swelling of the soft parts.

Fracture of the lower part and of the humerus.

In a transverse fracture of the humerus above the elbow joint there is likely to be an exaggerated prominence of the elbow joint and a

CASE III. PARTIAL ANKYLOSIS.

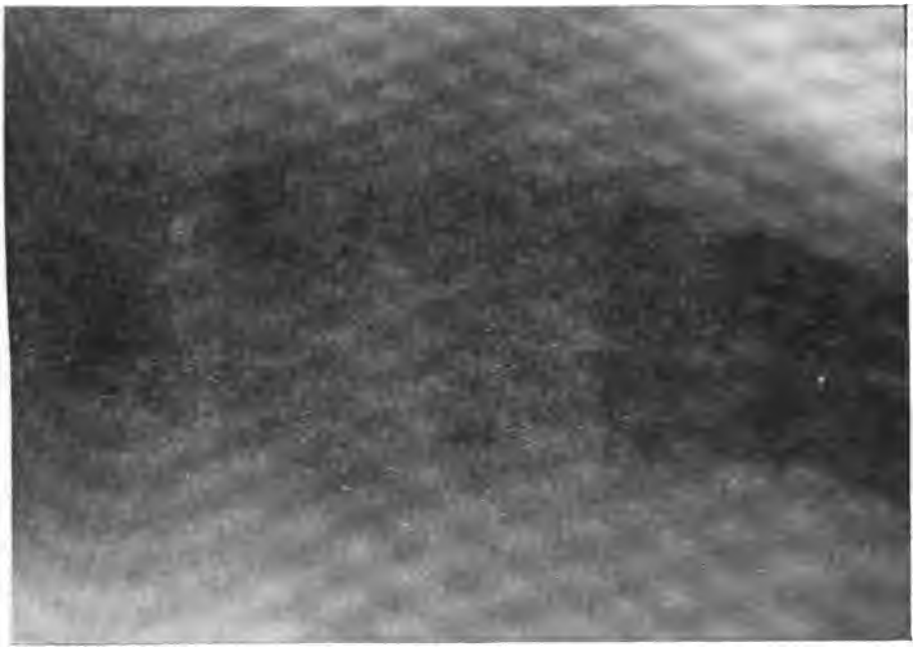
fullness in front. This is accounted for by the forward displacement of the fractured end of the humerus. Crepitation and marked lateral anterior and posterior mobility of the arm will be present. The relative relation of the bony prominences, the external and internal condyles and the olecranon will be undisturbed.

T fracture of the elbow joint.

The chief characteristics of this fracture are to be found in the extreme mobility and wobbling motions in all directions with distinct crepitation from slight motion. The X ray or on anæsthetic will be necessary in order to definitely determine this lesion.

Treatment of fractures of the elbow joint.

Fractures usually come under the observation of the surgeon early, *i. e.*, within a few hours after the accident. Upon inspection there will be swelling about the joint, which will not reach its height until two or three days have elapsed. Hence it will be unwise to encase the arm in any permanent splint at the first dressing. It is my practice to etherize my patient, ascertain the exact form of fracture which exists, reduce it and put the arm into a right angle splint and a sling. After the lapse of two or three days, the swelling having reached its height and commencing to subside, I remove the temporary dressing



T-FRACTURE OF THE ELBOW-JOINT.

and flex the arm as much as possible. The degree of flexion which one may employ depends upon the amount of swelling which is present, but the angles should be as acute as possible. The position of extreme flexion is adapted to fractures of either condyle and to the T fracture of the humerus. For a transverse fracture of the lower end of the humerus a right angle splint is usually employed. Much attention should be paid to the complete reduction of this fracture, for a failure to get the lower fragment forward into its proper relation with the shaft of the humerus will result in the permanent inability of the patient to properly flex the arm.

In treating fractures of the olecranon there is apt to be a considerable degree of swelling which must be reduced before one can determine the amount of separation between the fragments. If there is none the arm can be placed in a right angle splint; if there be considerable, a straight splint will be necessary and adhesive plaster straps should be adjusted in a manner so that the separated fragments can be maintained in position.

In hospital practice I X ray before dressings are applied for purposes of diagnosis, immediately after the splint is applied to determine whether the reduction is complete, and once or twice during convalescence.

The arm should be inspected frequently after the dressings are applied. The condition of the fingers is an excellent index of the circulation in the extremity. Some soreness, sensitiveness and pain will be experienced in all fractures, but severe pain is always an indication that something is wrong, and usually indicative of too much pressure by splint, adhesive straps or bandage.

Concerning passive motion there is a great diversity of opinion, but it is inadvisable to attempt much in this line until the fracture has united. Ankylosis will not take place in a joint if there is no displacement of fragments, *i. e.*, if the fractured bones are in their proper relation true ankylosis will not occur. A condition of false ankylosis may exist, but this will rapidly improve by passive motion, massage, etc., and little is gained by passive motion until bone union is complete.

I am an advocate of extreme flexion as the most desirable position in which to mobilize fractures of the elbow joint. It preserves the ability to flex the arm, and loss of power of extension is rare. It will exist for a time, but is much more readily overcome than impaired flexion.

Complications and sequelæ.

Surgeons recognize an element of uncertainty as to the outcome in cases of fracture, especially when a joint is involved. The patient is inclined to severely criticize any result which falls short of a complete restoration of functions and absence of deformity.

The most common sequelæ are:

1. Impairment of function by complete or partial, false or true ankylosis.
2. Paralysis from pressure of dressings or pressure upon motor nerves by the callus.
3. Adhesions between muscles or tendons and the callus.
4. Non union of fracture and delayed union.
5. Deformity.

True ankylosis occurs when there is osseous union of the articular surfaces of bone. The loss of function of the joint is absolute. False ankylosis is a condition of partial or even complete loss of motion occasioned by changes in the soft structures. More or less false ankylosis will occur after every fracture of the joint, but usually improves and not infrequently entirely disappears after the lapse of time. A true ankylosis will not yield except by forcible manipulation under an anæsthetic, and this treatment is frequently conducive of more harm than good. Such attempts are frequently followed by pain and swelling of the joint with more firm fixation than before.

Case 1, which I will now cite, is illustrative of a true ankylosis. Miss V., aged twenty, whom I saw March 19, 1899. She fell forward upon the arm, sustaining an injury to the left elbow. The pain was not very severe and she was able to use the hand somewhat. No retentive dressing was used. Two or three weeks after the accident pain became severe, the arm commenced to swell at the elbow, and a distinct arthritis developed. Passive motion only aggravated the condition and hastened the ankylosis, which was complete within three months. The skiagraph showed a fracture of the internal condyle and true bony ankylosis of the joint. December 23, 1899, about nine months after the accident, I made a resection of the elbow joint, which improved her condition considerably, yet she failed to get free motion. I again advised operation, which she underwent December 8, 1900. In this operation I resected about three-fourths of an inch more of the humerus, which has been followed by the most perfect results which it has been my fortune to obtain.

Case 2, another illustrative of true ankylosis of the elbow joint. Master Y., aged ten years, fractured the elbow joint in the summer of 1901. The internal condyle was wired, as shown in the accompanying skiagraph, and ankylosis of the elbow joint was complete when I saw the case in October, 1901. On October 30 I resected the elbow joint, removing the lower end of the humerus and upper end of the ulna. This resulted in fairly good motion, yet it is not as satisfactory as Case 1.

Case 3, illustrative of partial ankylosis. Mr. C., aged thirty-eight, met with an injury December 1, 1902, and on the 6th of December, under ether, I reduced a dislocation of the elbow joint. The skiagraph revealed no fracture, but restricted motion of the elbow joint was present when I examined him in February, 1903. (See skiagraph.)

In the skiagraph it will be seen that there are points of ossification just anterior to the joint. As no fracture could be made out at the time and none showed in the skiagraph, I am inclined to attribute the

ossification anterior to the joint to the osteoblastic tissue which was present in the ligaments at the point where they were torn from the bone. About one-half motion now exists and he is improving.

2. Pressure paralysis.

Swelling of an extremity at the point of fracture is to be expected and care must be exercised to make allowance for it. Sometimes it happens that the swelling is excessive and the splints cause pressure upon the soft parts, resulting in impairment in the circulation and pressure upon the nerve trunk. The patient complained of a sensation of "pins and needles" over the region of nerve distribution. Pain and

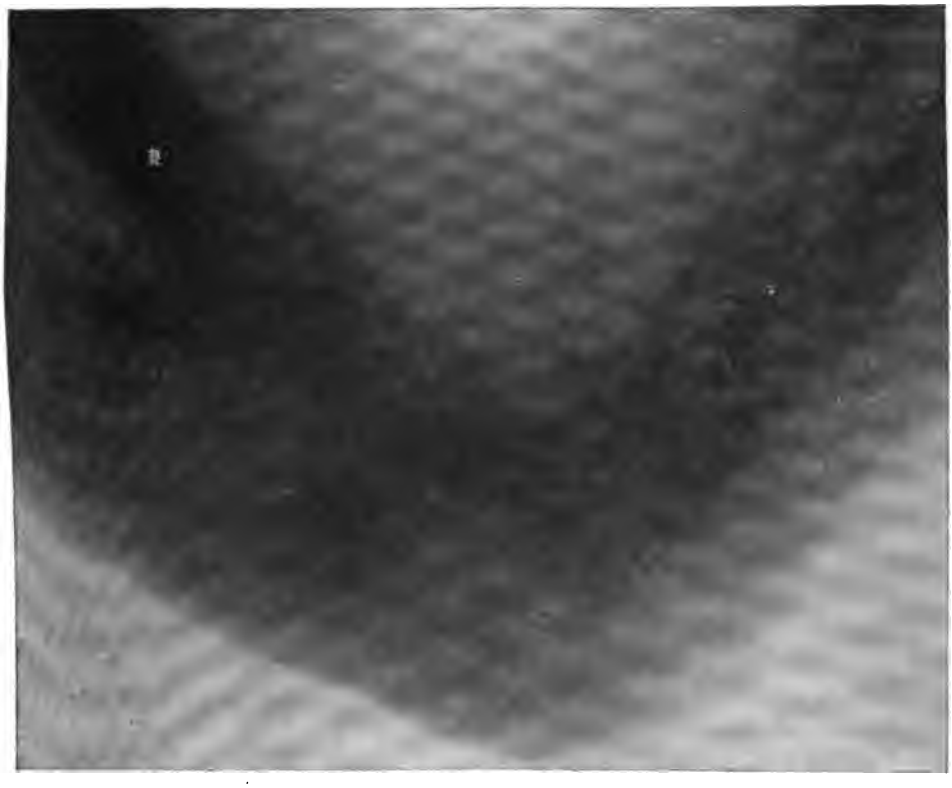
FRACTURE OF THE CONDYLE AND OLECRANON.

palsy of the muscles occur with trophic alterations in the skin and appendages. Sometimes a bone callus may cause pressure upon a nerve trunk, but by far the most frequent cause is too tight adjustment of dressings.

The prognosis is, on the whole, favorable, for by treatment with electricity, douching with alternate hot and cold water, and massage, improvement commences quite promptly and restoration of function usually occurs within a year.

3. Adhesions between muscles or tendons and the callus.

This is a rare condition in connection with fractures of the elbow joint, but liable to occur in fractures of the lower third of the radius and ulna. Very recently a case of unusual interest occurred in my practice. On January 16, 1903, Miss G. met with an accident while coasting which resulted in fracture of the ulna and radius about three inches above the wrist joint. Anterior and posterior splints were adjusted and changed from time to time. The radius united readily but there



T-FRACTURE, SHOWING DISPLACEMENT OF FRAGMENT.

was non-union of the ulna. Plaster of paris was substituted for the anterior and posterior splints and changed from time to time. I saw the patient again April 18, three months after the accident, and could detect motion in the ulna. An enormous callus had formed at the point of non-union which had incorporated the tendons of the flexor profundus digitorum and flexor sublimis. The fingers were in a semiflexed condition with inability to approximate the thumb to the fingers. This seemed to me to be a hopeless state of affairs as far as function of

the hand was concerned. I determined to try operation and on April 18, 1903, I made an incision six inches in length on the anterior surface of the forearm midway between the ulna and the radius. I found a very marked amalgamation of all the flexor tendons of the forearm and the tendons adherent to their sheaths. The operation consisted in separating each muscle and tendon from its adhesions, sacrificing by necessity the sheath of the tendon in many places. I then came down to the callus, removed a part of it and wired the fractured ends of the ulna and separated the callus between the radius and the ulna, allowing of supination and pronation.

I had never before attempted so radical a dissection of the tendons of the forearm and felt very solicitous about the outcome of the case. The wound, however, healed by first intention throughout and there is almost complete restoration of function. Each finger moves freely and is easily approximated to the thumb. Had I failed to secure first intention union the result in this case would have been disastrous in the extreme.

4. Non-union and delayed union.

In case of non-union with continuance of motion a false joint may be formed. In order to relieve this condition it will be necessary to reset the ends of the bone and wire. In case of delayed union it is only necessary to continue the use of a splint until firm union is obtained.

Quite recently a case of fracture of the tibia and fibula has come under my observation. One year ago a patient consulted me for non-union of these bones. The man was about thirty-five years of age, in apparently good health, and a carpenter by trade. The fracture had occurred some two months previous and there was no attempt on the part of nature to unite the fracture. A sharp pointed instrument was introduced through the skin into the cleft in the bone at the line of fracture and the surface of bone was scratched and extensively irritated. The leg was then incased in a plaster of paris splint which was changed from time to time. Eight months elapsed before union could be considered complete.

DEFORMITY.

In fractures of the elbow joint deformities which do not interfere with motion are of no great moment. But few exist which will not restrict the movement of the point. A fracture of the lower end of the humerus is liable to heal with an anterior displacement of the upper fragment. This will be followed by inability to properly flex the forearm.

Considerable deviation from the normal in the healing of fractures of the condyle may occur with no special restriction of motion at the elbow joint.

DISCUSSION

DeWitt G. Wilcox, M. D.: I did not have an opportunity of reading Dr. Brigg's paper, and this is the first time I have heard it. I shall only seek to emphasize one point, and that is the advisability of the exaggerated flexed position for these fractures. I think it is the only position which will hold the fragments thoroughly in place and prevent any deformity of consequence.

I recall a case I had a few months ago, an old gentleman who had two fractures of the lower end of the humerus, transverse and longitudinal to the condyles. He had been treated two weeks by his physicians, who had tried various positions of the arm to retain the fractured ends in position, except the exaggerated flexed position, and they declared it was impossible to keep the fragments in place. When the arm was straightened the fragments between the condyles would separate and the lower end of the humerus would slide backward and upward out of place, while if he lifted it up at an acute angle the fragment seemed to go back into place almost naturally. Taking this hint, I suggested that it be kept in that position for two weeks before passive motion was instituted. In this case that was the only position in which the fragments could be kept in apposition and healing effected.

George F. Shears, M. D.: In speaking of the complications which sometimes follow these fractures I want to call attention to those cases of ununited fractures and to offer a suggestion as to one unfortunate method of treatment. Many cases have come to me for treatment, at different times, and I have made use of many, if not most, of the methods which have been recommended for the cure of these fractures. I have never been quite satisfied with the results until recently. I have tried wiring, ferrules and various other expedients that have been recommended for these conditions, but for the past few years I have been using, and with entire success in my cases, what is known as the Parkhill clamp. I have used it in cases of ununited fracture of the femur, ununited fractures of the tibia and fibula, and ununited fracture of the radius and ulna. I have very recently had under my care a case of ununited fracture of the radius and ulna, the fracture occurring at a point just below the elbow, in which it seemed difficult to maintain the fragments in apposition. The surgeon who had charge of the case before me had operated upon it and had wired the ends of the bones together, but with no results. The patient had gone to a second surgeon, and this surgeon operated in a similar manner, but secured no permanent results. Following the first operation the wound had healed by first intention, and there could be no claim that sepsis had anything to do with nonunion. In the second case there had been sepsis, which might have accounted for the non-union.

I made use of the clamp just mentioned, putting one clamp into the ulna and another into the radius. The operation, if yóu are not familiar with it, consists in cutting down upon the bone, screwing two screws into the bone above and two in the bone below the line of fracture. These screws are held in place by the wings of the clamps, which extend from each screw above and across the fracture. With this clamp there can be no possible lateral deviation. By tightening the screws the ends of the fractured bones may come into as firm proximity as you desire, and there is no opportunity for any motion, as often occurs where a single wire is placed in the bone. The screw, and the wings of the clamp, stand high enough above the surface of the integument to admit and permit of dressings being placed under them, and also plaster-casts being applied after the bones have been in place long enough to begin to unite. In this case I obtained prompt and satisfactory union, although the two previous operations were failures in the hands of good men.

H. P. Cole, M. D.: I desire to call attention to one point in regard to the examination by the X-ray of a united fracture. It often occurs that the plastic deposit forming the union will not show on examination or in the picture, and we will be liable to think the bone has not united. This very thing occurred in a man who afterward came to me. The surgeon who was treating him examined the point of fracture and took a photograph of the part. Both showed no union, and he cut down to wire the bone together, but found it already united.

In regard to fractures at the elbow, I believe we can often do more with old bad cases than we have supposed. I had a case of a boy of fourteen years who suffered a fracture through the lower end of the humerus which separated the inner condyle and allowed an upward dislocation of the ulna and radius. This fracture occurred at three years of age, and the deformity had existed during the intervening eleven years. The ends of the ulna and radius, with the fractured condyle had gone well up the side of the humerus, and had there become adherent. I cut down on the outside of the elbow, dissected out the displaced bones, and forced them back to the original position, and there retained them with a splint and bandage. At the end of three weeks another skiagraph showed the bones in very near a normal position, and the patient has had much better motion and less pain since the operation.

Dr. J. H. McClelland: I happen to know of a beautiful result recently secured by my young friend, Dr. Gregg. I think that should be added to the case of Dr. Briggs.

Dr. E. R. Gregg: I was very pleased to hear Dr. Briggs' paper, and especially to see the case which he presented. As Dr. McClelland said, I had one which was quite similar in results a few months ago and which I reported to the Allegheny County Medical Society. It was my first case of resection of the elbow-joint, and was done as the result of infection of the joint, the primary injury being a fracture of the olecranon, which was followed by a refracture. The bones were wired by another surgeon. Following this the joint and medulla became in-

fected and the arm got into a very bad condition, so I decided to resect the joint, and the result obtained was about the same as reported by Dr. Briggs, practically a perfect functional result. In reading up Jacobson he mentions two causes for failure in these cases. One is the removal of too much of the extremities of the bones involved giving too great freedom of the joint, making it frail, and the other is not removing enough bone, causing the anchylosis observed in some cases. He also says that resection of the elbow joint gives better functional results than resections of other joints.

INGUINAL HERNIA

BY E. H. PRATT, M. D.
CHICAGO

Your attention is invited to just a few points in connection with the radical operation for indirect inguinal hernia, using the term in the ordinary sense to describe a hernia which enters the internal abdominal ring, passes along the inguinal canal and either stops at the rings, forming a bubonocele, or passes through the ring into the scrotum or labia majora (for it sometimes occurs in women) constituting the complete variety.

The points which I desire to make have to do, first, with the location and extent of the incision; second, with the blood-supply; third, with the preservation of the muscular structures involved; fourth, the handling of the sac; fifth, the closure of the sac; sixth and last, orificial considerations.

Point first, *the location and extent of the incision*: The incision need not be more than two inches in length, and its middle should be the surface location of the internal abdominal ring, which is midway between the anterior superior spine of the ilium and the spine of the pubis. In making the incision it is well to draw the integument downwards so that it is displaced for a full inch or more. The incision is then to be made about half an inch above Poupart's ligament and in the same direction. There are two objects in this suggestion One is that when the tissues are liberated, the wound in the skin will not be located over that of the deeper structures, thus lessening the danger of infection of the deeper part of the wound, if the dressings, through any chance, should become misplaced. The main reason, however, is that the superficial external iliac and the superficial external pubic arteries diverge as they pass upwards; a couple of inches above the groin these arteries are sufficiently wide apart to permit operative interference between them without severing them. The first cut should not be a deep one, as the arteries mentioned permeate the superficial fascia; and as the object of the surgeon should be to avoid their destruction, the greatest care is required in the dissection. If care is taken in locating and making the wound as directed, the operator will probably not encounter the arteries at all and the whole operation will be comparatively bloodless.

Having made the wound in the superficial fascia and in the deep fascia co-extensive with the external wound, the tissues being held apart by retractors, the lower part of the aponeurosis of the external

oblique is bared and the index finger of the operator can be made to locate Poupart's ligament. By following it toward the pubis, the finger can be easily made to drop into the external abdominal ring. At the outer angle of the ring the external oblique aponeurosis should be severed as far as the situation of the internal abdominal ring. Retractors should now hold the severed margins of the external oblique apart and the lower fiber of the internal oblique and transversalis muscles, as they arise from Poupart's ligament and arch up over the inguinal canal, forming its upper boundary, will be disclosed, and also the festooning of the lower part of the internal oblique muscle forming the cremasteric covering for the cord. A small opening needs to be made, severing the cremaster fibers from the lower edge of the internal oblique. Neither the cremaster muscle nor the internal oblique needs to be severed, but a retractor can hold the margins apart, when the contents of the inguinal canal will be disclosed, the upper part of the canal being covered by the transversalis muscle as well, the fibers of which can be held backwards with the same retractor that pulls away the lower fibers of the internal oblique.

The hernial sac can now readily be found at the bottom of the wound, as its location is the most superficial of the tissues in the inguinal canal. It is to be seized and raised with one pair of forceps, while with another pair the clinging tissues of the cord are to be peeled away from around the complete circumference of the sac. After this is accomplished the index finger of the left hand can be introduced beneath the sac, and, by practicing traction upon the lower end of the sac the dissection can be readily continued until all the tissues of the cord are separated from the sac and the sac is completely isolated and the end of it cleared of all clinging tissues and at the operator's disposal.

Palpation of the sac at the internal ring will readily disclose whether or not there are any adhesions of intestines or of the omentum about the internal ring, thus settling the question whether or not it is necessary to open it. The better plan in cases where adhesions are slight and readily broken up by entering the sac with the index finger and loosening them by manipulation, is not to open the sac at all. In cases of old adhesions it may be occasionally necessary to open the sac to insure successful completion of this stage of the work.

While there are various methods of handling the sac, that of Kocher seems to me so superior to other methods, even to my own, that it is scarcely necessary to call your attention to any other method.

A closed pair of artery forceps is entered at the internal ring and under the guidance of the index finger of the left hand is carried

upwards, closely hugging the posterior surface of the transversalis muscle for about an inch and a half, care being taken not to wound the peritoneum. It is then protruded sharply outward and made to penetrate the muscular walls of the abdomen, the fibers of the internal oblique and transversalis being muscular tissue, and those of the external oblique being aponeurotic. In forcing the forceps through the tissues, if the artery forceps are dull pointed, a scalpel may be employed to effect their delivery. They are then made to protrude through the new opening and their expanded jaws made to seize the closed extremity of another pair of artery forceps, which is then dragged back through the opening and down into the inguinal canal at the internal abdominal ring. The jaws of these forceps are now opened and the end of the sac inserted in their grip, which is now closed and the forceps locked. The forceps are then drawn upwards, pulling the sac after them, so that the sac is made to leave the abdomen by the new opening, which is an inch and a half above the internal abdominal ring.

The next point to which your attention is called is the closure of the wound, which is to be accomplished by a single thread of catgut. The sac is fixed in the new position by the end of the suture, which is made to include the aponeurosis of the external oblique and a few of the muscular fibers of the internal oblique, piercing the sac in its passage and tying on both sides of it, this one stitch being sufficient to hold the sac in position, as there is no tendency to misplacement. This same thread is then made to close the inguinal canal and the rest of the wound.

If the hernia has been a large one and the fibers of the internal oblique and transversalis are particularly redundant, they can be shortened by a stitch which is always valuable in bringing together muscular fibers. The needle is made to pierce the muscular tissue from above downwards, and then, instead of being brought back and entered from above, as in an ordinary continuous suture, it is carried along for a quarter of an inch from its point of exit and made to enter the muscular tissue at its lower part, the distance of its entrance from Poupart's ligament being the same as that of its exit a quarter of an inch above, and then carried through the muscular redundancy to its upper border. In passing downwards again the same rule prevails, the stitch entering a quarter of an inch below its point of exit and on a level with it. This converts the continuous suture into a mattress sutures and secures a grip upon the muscular fibers themselves, instead of simply pulling on the areolar tissue, and thus is more secure. In this way the redundancy of the internal oblique and transversalis is

taken up and at the completion of the work the thread is located near the point which once marked the outer part of the angle of the external abdominal ring. The needle is now carried through the aponeurosis of the external oblique muscle and the external abdominal ring is re-formed, only in much smaller proportions than it originally existed, care being taken not to make it so small as to unduly impinge the structures of the cord.

The wound in the aponeurosis of the external oblique muscle is then closed by a continuous suture which passes, of course, from the pubis upwards and outwards until the fibers have been united as far as they were severed. An extra turn of the thread is given here so as to prevent any possible loosening of the suture, after which a similar line of continuous suturing is carried from above downwards and inwards, matching carefully together the severed margins of the fascia. The thread is now located once more over the external abdominal ring and is now employed to bring together the margins of the skin by the subcutaneous method. The thread can be secured at the upper and outer end of the wound by bringing it out through the skin half an inch from the wound and securing it with a knot, after which the thread is to be severed. The appearance of the wound then is simply a fine scratch along the groin, two inches in length. No tissue has been impinged and not a single island of it has been completely surrounded by the thread except where the suture was first secured at the fixation of the sac in the abdominal wall. The employment of silk or silk worm gut or silver has been found to be wholly unnecessary, especially where Kocher's method of shifting the sac has been employed, as there is no strain upon the stitches and no tendency of the hernia to return. The ordinary carbolized catgut is ample as a ligature. The continuous suture is adequate and the subcutaneous co-aptation of the margins of the wound all that could be wished for.

Attention should then be given to the pelvic terminals of the sympathetic nerve. All rectal difficulties, such as hemorrhoids, pockets, papillæ, fissures, etc., should be corrected, moderate dilatation of the sphincters practiced and all abnormalities of the sexual apparatus properly dealt with. Phimosis is a very common concomitant of hernia and very frequently the meatus urinarius will be found sufficiently small to account for much of the enervation of which the hernia is but the outward expression. Circumcision, meatotomy, snipping of the frenum and the passage of urethral sounds to further stimulate the sympathetic nerve and correct catarrhal conditions of the urethra, which are also frequently encountered in such cases, will be found serviceable measures in the cure of hernial cases. All general surgery

prospers better when followed by conservative orificial work, and hernia cases especially so, as the anatomical displacement which constitutes hernia is nothing but a marked expression of enervation of the sympathetic nerve, upon which all nutrition depends.

Of course the patient should always be consulted beforehand concerning pelvic work, as if he applies for treatment of the hernia alone and finds that some unexpected surgical work has been visited upon him he is not likely to be pleased with the gratuity. The orificial work should not be forced upon a patient, but submitted to his judgment, and his wishes in the matter followed, and if he prefers to remain with the forms of irritation perpetually sapping his nervous reservoirs, after having been warned of what is taking place, the surgeon has done his duty and the patient should be permitted to continue suffering the nervous loss if he prefers to do so. The patient should be able to secure the correction of the hernia without having other work—no matter how much he stands in need of it—visited upon him. The majority of patients, however, are quite reasonable, and if they understand that the pelvic work is an aid to the healing of the hernial wound and an insurance against recurrence, they are only too glad to be enlightened on the subject and obtain the full benefit of the surgeon's knowledge.

It is common in the operation for complete inguinal hernia to carry the external wound well down upon the scrotum. This seems to me unnecessary, a two-inch wound opposite the internal sphincter being quite sufficient. It is common practice to sever the superficial external iliac and the superficial external pubic arteries and veins. This, too, has seemed to me unnecessary and an undesirable mistake, also, because the blood vessels are needed for subsequent repair of the wound. It is common practice to sever that part of the internal oblique and transversalis muscles which cover the inguinal canal and also the cremaster muscle. This has seemed to me an unnecessary mutilation of tissue and inadvisable, as it threatens a subsequent weakening of the parts. The sac is usually opened, whereas, in my estimation, this is seldom necessary. The Bassini method of shifting the location of the cord to a more superficial position than it naturally occupies is in common vogue, but seems to me in every way less desirable than the Kocher method of treating the sac.

It is customary to close the wound by sets of deep and of superficial interrupted sutures, the deep ones being constructed of some unyielding material, as kangaroo tendon, silk worm gut, silk or silver. This I have found to invite infection by obstructing the circulation and affording permanent lodgment in the tissues for foreign bodies,

The continuous suture of carbolized catgut has served me so well for many years that I have found it thoroughly adequate to all requirements of hernial cases.

It is customary to overlook and completely ignore all orificial consideration, but, in my experience, the omission is a serious mistake.

To call attention to a small and properly placed incision to the economy of the blood supply, to a saving of muscular structures and the advisability of handling the sac without opening, and to shifting its location by Kocher's method, to securing good capillary circulation for the inguinal wound by the use of the continuous suture of catgut, which remains in its integrity sufficiently long for healing purposes, and at the same time does not impinge tissue and thereby obstruct the circulation necessary to repair, and to call attention to the advantage of following the hernial operation with whatever orificial consideration the case may need, are my reasons for inviting your attention to so timeworn a subject as that of hernia, for, although the subject is an old one and text book considerations are abundant, so long as one-fifth of the human race still remains subject to hernia its consideration will never be out of place in a medical convention, especially so long as there is any possibility that prevailing practices are still sufficiently imperfect to furnish opportunities for improvement in the details of operative interference.

DISCUSSION

SIDNEY F. WILCOX, M. D.: Dr. Pratt has given us such an excellent description of the operation he employs that it will not be necessary to speak of that. I will say that it has not been the operation which I have employed, because I have had splendid results with what is known as Bassini's operation that I have not found it necessary to deviate from that except, perhaps, in some special cases. I think that in all operations for hernia there are three things to be considered. The first is to get perfect co-aptation of the parts, because it is necessary for permanency. The second is to carry out the details of the operation so carefully that we will get primary union. because upon that often depends the permanency of the result; also because if we get suppuration we are very liable to have the formation of cicatricial tissue, which always becomes a weak tissue. The third point is what we have been aiming at in every operation suggested and that is permanent results.

I have operated on all ages; that is I have operated on children from one month of age to persons up to sixty years of age, and while it is not generally admitted that an operation for hernia in young children is the proper thing, still I believe it is necessary in some cases; in cases where the opening is very large and in cases where there is danger of strangulation. In two or three cases of this sort I have found it necessary to operate in babies. As to the various methods of technique the Bassini operation seems to me offers all that is desired,

While I think the Kocher operation, as described by Dr. Pratt, is perhaps a very excellent one, it is one that I have not tried in my treatment because the other one has secured for me all that I desired.

Now, as to the method of uniting the wound; I have generally followed the plan of uniting the deep parts, and the aponeurosis of the muscles with kangaroo sutures, simply because they last a little longer in the tissues than does the ordinary catgut suture. I do not know that there is any need of this, for it strikes me that the value of a suture is lost after about ten days or so, as far as its holding strength is concerned. But after the danger of the rupture which is aggravated by the retching and vomiting after the operation, and the unpleasant symptoms which frequently follow have subsided, a permanent suture is of but small value. I know of some surgeons who use silk-worm gut. They leave it in the tissues permanently and it is never absorbed, but it occurs to me that as a suture it is likely, at times, to serve as a nidus for infection, and the same thing may be said of silver wire. One surgeon of my acquaintance told me that he had seen a silk-worm gut coming through the surface three years after an operation for hernia. The kangaroo suture lasts from thirty to forty days, or something like that, but whether it has any special use after ten days is very uncertain. I think the great thing in getting good results, and one which tends to permanency after operation, is keeping the patient in bed until the new tissue is strong. That is one thing I insist upon, because I do not believe in spectacular surgery. I do not believe there is any use getting patients out of bed in two weeks. I do not care whether it is an operation for appendicitis or hernia or what it is. In the building of a bridge, or a great structure, the engineer always looks to what is termed the factor of safety. The other day in talking with a man who has built some of the largest structures in the country I asked, "What is the factor of safety?" He replied, "It is about ten. We build a bridge or similar structure to sustain a weight about ten times greater than it will ever have upon it. The reason for this is that we want to be absolutely sure." So upon the same theory of absolute surety I do not believe there is any harm in keeping the patient in bed a week or so longer than is necessary. If he gets up in two weeks he may be all right; if he gets up in three or four weeks you are pretty sure the result will be right, and this is a great deal better than to run any risk whatever.

George F. Shears, M. D.: Dr. Pratt referred to two classes of inguinal hernia, one in which the hernial sac is in the canal, and one in which it passes through the external, becoming hernia of the scrotum, or rupture. In the first class of cases in which the sac does not pass down through the external ring, instead of dividing the external ring, as has been described, I try to make my operation in such a way that the external ring shall not be divided. The ring is made up of certain cross-fibres that give strength to the part, and by no means can that strength be added to by division and subsequent suture. It is not a simple coming-together of the tissues, but a strengthening of tissues by a crossing of fibers. In such cases I make an incision through the external-oblique, which is entirely aponeurotic, in the line of its attachment, so there is no division of fibers, letting the incision extend down

to the ring, but not dividing it. These fibers are separated so that the sac which lies in the canal and is easily separated from the gut can be brought directly out of the incision. The sac may then be treated as deemed best by the operator, either by the plan recommended or by simply cutting off the redundant tissue and suturing, as you would in an ordinary case of abdominal section. The tendons must then be brought over to Poupart's ligament in any way that is desired, either by continuous sutures or by interrupted sutures, using kangaroo or whatever suture you choose, when the external oblique is closed. By this method there is no division of the external fibers, which give strength to the external ring. In cases in which the hernia is small, where there is a small sac protruding through the external ring, I make an extended incision entirely below the external ring. I separate the sac right up to the ring, but not above the ring, and pull the sac back through the external ring again, and up into the incision not dividing the fibers of the ring, and then remove the sac. This is on the line of conservation of tissues which, I believe, was one of the aims of Dr. Pratt's paper.

L. K. MAXWELL, M. D.: The gentlemen have spoken of the various methods of treating inguinal hernia, which is all very nice and easy to do. In a very large per cent of the cases in which we operate for the radical cure of inguinal hernia, it is done when there is strangulation. The operation is then not so easy, and especially when the condition has been present for a longer or shorter period, but time enough has elapsed for necrotic conditions to set up it makes the dealing with this sort of tissue a very difficult task. About a year ago I was called to see a woman who but a few days previous to my visit had a hernia that had become strangulated. They had called in a physician, who examined her and informed her, regardless of the fact she had been troubled but a short time, that it was a tumor of some nature, and treated her for such until about 10 in the evening, when he called at my office for my advice about the case, and asked me to see her the next morning with him. I told him from what I already knew of the case that I should want to see her that night. We found her in a very bad condition and, calling an ambulance, had her sent to the hospital. I operated at once and found about six inches of the colon just above the sigmoid flexure had got into the sac and had become strangulated. I brought the gut up, but could barely drag enough of it up to find some health tissue to suture and prevent infection. The patient was in a moribund condition and I felt that she would die in a short time. The next day when I went to the hospital I amputated the necrosed portion of the gut, establishing free drainage, reunited the amputated ends of the intestine and the woman made a good recovery. About four weeks after she, having formed the hospital habit, returned for the removal of impacted gall stones.

THE FINAL RESULTS IN OPERATIONS FOR MYOMATA UTERI AND FIBRO-MYOMATA UTERI

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BOSTON

In the consideration of all cases of myomata, and fibro-myomata uteri before the operation, one of the most important questions, from the standpoint of the patients, which almost invariably arises is as to what are the final and permanent results of the operation. If the patients live are they cured, or are they merely left alive with a new combination of distressing symptoms? Are they restored to a life of ordinary usefulness and activity proper to their age and circumstances, or are they merely physical wrecks of another type?

With a view to get some light in a measure upon this aspect of the subject, I determined to look up whatever cases I had operated who were still alive and could be found, and obtain from them, so far as possible, answers to a series of questions, duplicates to be presented to each one.

I have always made extraordinary efforts to keep track of all cases of fibroids operated by myself, and therefore have been able to gather what I believe is an unusual number of answers. These questions have not been presented to any case operated on later than July 1, 1902, so that a year or more has elapsed since the time of operation.

There have been up to that time 168 cases in all, five of which died as the immediate result of the operation. This includes all cases of myoma or fibro-myoma operated on by myself up to the above date, without reference to the special operation in any case. As a fact, of course, each case had applied to it such operation as at the time seemed best to fit it.

There were, therefore, of—

Abdominal hysterectomy	79 cases	with 4 deaths.
Vagino-abdominal hysterectomy	11 cases.	
Vaginal hysterectomy	47 cases.	
Myomectomy, abdominal	2 cases.	
Myomectomy, abdominal; tubo-ovariotomy	14 cases	with 1 death.
Tubo-ovariotomy, double	5 cases.	
Myomectomy, vaginal	8 cases.	
Curetting	2 cases.	
Total	168 cases	with 5 deaths.

It will thus be seen that most of these cases, 158 out of 168, were operated on by opening the abdominal cavity, and that the operations were sufficiently radical to make conclusions drawn from them of corresponding value.

Of the 163 making a surgical recovery, to my knowledge ten have since died. One was from causes which were probably a consequence or continuation of her condition at the time of operation. She was an old lady of 68 who had a large single fibroid of most peculiar consistence. The central portions of it had broken down into a grumous fluid substance which distinctly gave fluctuation, and she was in a very bad way at the time of the operation. Abdominal hysterectomy relieved her of the tumor and she made a good surgical recovery, but lapsed into a peculiar nervous condition with much mental depression, and died two and a half months later as from a general marasmus. Another died three months after the operation from empyema. Another eight months after operation from a recurrence of a sarcoma, the tumor removed having been a fibro-sarcoma and very adherent. The other seven died at periods varying from ten months to six and a half years, from causes in no wise relating to the fibroids or the operation for its removal.

This leaves 153 alive at the present time so far as known, which is to me a remarkable statement when it is known that the first of them were operated upon nearly thirteen years ago, and that many of them were desperate cases at the time of the operation. This surely shows a gratifying percentage of recoveries, so called, in a condition of such gravity.

Not content with knowing that the patients were merely alive, I desired to know just what their subsequent condition was; hence the following set of questions, which were put in the form of a circular letter:

DEAR MADAM:

Will you write answers to the following questions? I am trying to accumulate data as to the results of operating in cases such as yours, and a response from you will be of valuable assistance. Whatever reply is made will be considered confidential. Please answer each question in space following it, and questions 5, 6, 7 and 8 by full explanations, if necessary.

1. Are you as well as before the operation?
2. Have you been able to resume your accustomed duties?
3. How long after the operation before you considered yourself well?
4. Are you free from discomfort as a result of the operation?

5. What has caused you the greatest discomfort since the operation?
6. Have you the same power of endurance as before the operation?
7. Have you grown stouter. If so, how much have you gained?
8. Have you had any new difficulties distinctly attributable to the operation?
9. Do you now consider yourself well?
10. Under like circumstances would you undergo the operation again?

No special questions have supplemented these, nor has special attention been drawn to any of the questions, and in no one of the answers received did the writer have the slightest influence in determining the replies as returned. Several sent back wishing to know how I wanted the questions answered, and in each case I invariably replied to answer them as best she could from her understanding of them, and that I wanted only to know what her actual conditions was.

Many supplemented these categorical answers by sending a general letter, which was not only interesting reading in itself, but also threw much light on the general aspect of the whole question. The sum of all the impressions made by these letters are more optimistic and favorable than any conclusions drawn by me. Of the 153 patients competent to answer 124 have replied. The answers received have been carefully summarized so far as possible, and the following conclusions have been drawn from such summary:

Question 1: "Are you as well as before the operation?" To this 52 answered "yes"; 59 answered "better"; 11 answered "no"; 2 answered "doubtful"; so that 111, or nearly 90 per cent, were as well or better than before the operation.

Question 2: "Have you been able to resume your accustomed duties?" 94 answered "yes"; 11 answered "not wholly"; 18 answered "no"; 1 was unanswered. That is that 76 per cent had resumed their accustomed duties at the end of one year, and 9 per cent more were on the way to doing so.

Question 3: "How long after the operation before you considered yourself well?"

The replies to this question were, as would be expected, very diverse. 16 did not answer at all; 15 more reported that they were not fully recovered but were improving; 2 answered "in a short time"; 1 answered "a long time", but intimated that recovery had taken place.

Others answered as follows: 2, in one month; 2 in two months; 4 in three months; 2, in four months; 2, in five months; 13, in six

months; 3, in seven months; 2, in eight months; 1, in nine months; 28, in one year; 1, in fifteen months; 9, in eighteen months; 1, in twenty months; 12, in two years; 5, in three years; 1, in four years; 2, in five years.

Of those answering "not fully recovered" a sufficient time had not elapsed in some of the cases to know what the permanent result will be. The great majority considered themselves well in from six to twenty-four months. The partial solution of this question has been very helpful to me in being able to give encouragement that patience and time alone will show what to expect for a permanent result. Much could be said concerning the answers to this question, but attention will be called only to the fact that the delay in recovery is largely caused by these two factors: first, the time necessary to recuperate from conditions established before the operation, this usually being the lesser cause of delay. Many cases are extremely enfeebled before consenting to the operation, and afterwards a proportionately long time is necessary for recuperation; second, conditions due to a precipitated menopause.

Question 4: "Are you free from discomfort as a result of the operation?" 89 answered "yes"; 18 answered "no"; 15 answered "not quite" or "nearly so"; 2 did not reply at all; that is, 84 per cent were nearly or quite free from any ill results directly attributable to the operation.

Question 5: "What has caused you the greatest discomfort since the operation?" brought forth, as was to be anticipated, a great variety of replies. From them it is obvious that the principal complaints are of conditions characteristic of the menopause, whether natural or induced. When precipitated, as in so many of these cases, it is usually more violent than when occurring naturally. Of permanent discomforts three only report a "hernia" due of course to the operation. One of these developed, before the surgical recovery, pneumonia, and was in a precarious condition for some time, and I have no doubt the hernia was a direct result of this complication. I have since successfully operated the hernia and she is now well. The other two are still afflicted with the hernia. Two only report constipation, which is remarkable in my opinion. Twelve report some form of weakness or irritability of the bladder, again a remarkable circumstance it seems to me, when it is remembered what extensive manipulation is required in many cases. In three of these the bladder was opened in the course of the operation. Aside from these there were no permanent disagreeable effects from the operation. Most trouble was experienced from a group of symptoms characteristic of the menopause, most of which

will undoubtedly improve with time. Twenty-eight reported that there were no discomforts of any kind.

The answers to this question were very varied and difficult to analyze, and many discomforts were attributed to the operation as a direct result which were doubtless incident to ordinary vicissitudes of life in women who had reached maturity.

Question 6: "Have you the same power of endurance as before the operation?" 47 replied "yes"; 31 replied "more"; 14 replied "not quite"; 32 replied "no"; that is, 63 per cent have as much or more than before the operation; 11 per cent are short of it, but apparently improving, and only 25 per cent are behind the ordinary stability of life. The answers to this question seem especially noteworthy.

Question 7: "Have you grown stouter? If so, how much have you gained?" 2 did not answer; 39 answered "no"; 5 had "lost" weight, and 78 answered "yes". These latter gained all the way from 5 pounds to 80 pounds in one case, the average being 20½ pounds. Four had gained in weight immediately after the operation, but had subsequently returned to their normal weight. Several had gained very rapidly at first from 25 to 50 pounds, but had lost about 75 per cent of it later. From this it will be seen that something over one-half of all cases made a permanent gain in weight.

Question 8: "Have you had any new difficulties distinctly attributable to the operation?" 85 reported unequivocally "no"; 1 reported "yes"; 1 did not reply, and 37 replied "yes" but qualified the answer by mentioning that the complaint was as signified by answers to questions 4 and 5. Most of these difficulties were distinctly attributable to the menopause. When one considers the complicated mechanism of a hysterectomy it is certainly remarkable that more often a premanent disability is not left behind.

Question 9: "Do you consider yourself well?" 3 did not answer, and may therefore be classed among those who have not recovered; 28 answered "no"; 14 answered "not quite", and 79 answered "yes". That is, two-thirds gave a favorable response without qualification, and less than 22 per cent still considered themselves "not well".

Question 10: "Would you undergo the operation again?" 4 were in doubt; 5 replied "no", and 115 replied "yes".

This was meant to be the crucial question, and it is certainly satisfactory to have so large a number give without qualification, a favorable reply to a question of this character. A woman who has been through the entire experience is certainly entitled to respect for her opinions, and such an almost universally favorable answer to this last

question, especially at the end of such a series of questions, must be helpful in determining one's attitude towards the problem of whether to operate or not.

DISCUSSION

JAMES C. WOOD, M. D.: Dr. Emerson have given us so much food for thought that it is exceedingly hard in the short time allotted to the discussion to cover the various important details which necessarily go with a paper of this kind. First of all, I think Dr. Emerson is to be congratulated most heartily upon the results obtained, certainly so far as the primary mortality is concerned. Any man who can open the abdomen 158 times for so serious an operation as the removal of the uterus, or the removal of fibroid tumors, with only five deaths, is most heartily to be congratulated. This is a mortality-rate which is inspiring to us who are doing abdominal surgery. As regards the final outcome of these cases he is again to be congratulated.

I am sorry the doctor did not go more into detail as to the kind of cases he operated upon, and I trust when he sums up the discussion he will give us more definite information. Personally, I do not think that all cases of myo-fibromata call for operative interference. We know that a great many women have fibroids who are unconscious of the fact until they are discovered accidentally.

Personally, I recognize three indications for operation. First is hemorrhage; second is pressure-symptoms; and third, rapid growth. A small fibroid which does not give rise to any inconvenience should not be interfered with. I take it for granted that he has not included any of these simple forms of tumors such as we meet with almost every day in active practice. Then again, I wish he had told us more of his operative technique. I should judge that in operating upon 158 cases the series of operation extends back over a period of years.

DR. EMERSON: Thirteen years.

DR. WOOD: Thirteen years. During this time, of course, we have improved the technique of the operation very much. The present technique brings better results than we got thirteen years ago; not only immediate results, but permanent results.

It would also be interesting to know in what per centage of his cases he left one or both ovaries behind. I do not think the immediate outcome of the operation is seriously prejudiced by removing both ovaries, and I am satisfied that in leaving healthy ovarian tissue behind the final results are infinitely better than when both ovaries are removed. These are points I trust Dr. Emerson will fully elucidate in his final discussion.

This is, certainly, a most admirable paper. We owe it to humanity to keep a record of our work and then from time to time give to the profession such a summary as Dr. Emerson has given us to-day. Personally, I feel very grateful to him for taking the time and devoting the labor that was necessary in order that he might give us the information contained in this excellent paper. Again, I congratulate him upon his success and the society upon being permitted to listen to such a paper.

H. F. BIGGAR, M. D.: A splendid paper with splendid results. Will Dr. Emerson kindly tell us how many of the patients operated upon had passed through the climateric at the time of the operation; was the uterus removed or was there a part of the cervix left?

JAS. C. WOOD, M. D.: Another question I would like to ask is and that is what effect had these operations upon the sexual functions if any part of the ovaries or the uterus remained? This is an important question and one I think we should obtain information upon.

J. H. MCCLELLAND, M. D.: The question often arises as to the leaving of one or both ovaries, or if not possible to do that, to leave a portion of one ovary. Early in my practice I removed both ovaries invariably, if the uterus had to be removed. Later I made an effort to save one ovary, if not too much diseased; now I try to save a part of one ovary. I think this is in the line of Dr. Wood's inquiry, and is my practice at the present time.

S. F. WILCOX, M. D.: Along that line of leaving a portion of an ovary, I want to talk just a few moments in regard to an exceedingly interesting case. Twelve years ago I operated on a young woman, twenty-two years of age, removing two cystic ovaries; that is, I supposed I removed them entirely, and intended to do so together with the tubes. She was married a year or two afterwards with an entire understanding on the part of her husband as to the operation she had undergone. I have had her under observation since the time of the operation. She had menstruated regularly every month, and to all appearances it has been perfectly natural. Last December she ceased to menstruate, the uterus began to enlarge, and she went through a typical stage of gestation. Two months ago I delivered her of an eight-pound baby. As I say, I intended to remove both ovaries entire, (they were both cystic, about the size of an orange), and I know that I removed both tubes. Undoubtedly a portion of an ovary was left, but if any physiologist can explain to me how it is possible for a woman to become pregnant without the vestige of a tube I should be glad of the information. A physician who was present at both the operation and the delivery is here present and can corroborate my statement.

O. S. RUNNELS, M. D.: Dr. Sutton, of Pittsburgh, some years ago reported a similar experience. He had operated, removing both ovaries, and yet conception and delivery of a perfect child followed. In that case it was later proven that the woman had a third ovary. Of course there must be ovarian stroma, or such a thing would not occur.

W. E. GREEN, M. D: I wish to ask; is it not a fact that when an oophorectomy has been done and the tubes have been ligated en masse, that the ligatures may either cut through or be absorbed and leave a patulous tube. In such cases, where a part of an ovary had been left, it might account for the pregnancy. I think any surgeon is liable to leave a remnant of an ovary capable of carrying an ovulation. To my mind the occurrence of pregnancy cannot be accounted for in any other way.

N. W. EMERSON, M. D.: I recognized that a paper of this kind would not bring out much discussion, and I do not want to take up too much time in answering questions. Apropos to Dr. Wilcox's case, we had in our hospital a similar one under the care of Dr. Winn, in which case both ovaries and tubes had been removed some time previously at the Massachusetts General Hospital. Before operating he obtained the history from that hospital. Therefore, he supposed it to be a tumor, of a fibroid character. He made a hysterectomy, and after removing the tumor discovered that it contained a seven months' fetus. Then, of course, a thorough examination was made to learn how this could occur and to see if there was any ovarian tissue remaining. Upon the side of the uterus, evidently near the site of one of the ovaries, was found a very small particle of ovarian tissue. That was the only portion found where it was possible that an ovum could have been developed. The tubes were gone, and yet impregnation took place.

In answer to Dr. Biggar, as to the ages, it is impossible for me to say from memory. I think the youngest was twenty-eight years old and the oldest was sixty-eight and the average was forty-six or forty-seven. This is as nearly as I can give from my recollection of the cases. I would say that the larger majority, considerably over half, were beyond the average age of the menopause, in this climate. In a few of them only was the cervix left behind, except of course in cases where myomectomy was done.

The earlier cases were operated by the older method of extraperitoneal treatment of the stump, as we called it at that time; that is, an elastic ligature was applied and permitted to slough away, leaving cervix behind. I think, possibly, six or eight of these cases were treated in this manner. The other cases of abdominal hysterectomy so far as I can recall them off-hand, were treated in the simplest possible manner of making an abdominal hysterectomy. Of course there was some variation in special cases, but these were the usual procedures; tying the ovarian and uterine arteries and then removing the uterus with the cervix. After excising the cervix from the upper portion of the vagina, the vaginal wound was definitely closed.

As to the question of leaving one or both ovaries I have most positive convictions. In earlier cases I believed and followed instructions, and removed both ovaries. In the later cases—perhaps 75 per cent. of all—I have left ovarian tissue unless positive indications were present to remove it. I leave one or both ovaries if healthy. If diseased I resect them freely and try to leave some portion, no matter how little. From observation and experience I am convinced such cases make a quicker and more satisfactory recovery, than when all ovarian tissue is removed, especially if the case has not reached the menopause.

The class of cases referred to were cases sent me as a consultant by other physicians who had previously determined that the cases were of such character that they needed to come to one who was doing special work. The majority of these cases were such that had they been submitted to competent counsel the counsel would have agreed that they needed operating,

I quite agree with Dr. Wood in his statement, and think that a majority of fibroids do not need surgical interference. I believe that a fibroid is the most innocent form of tumor that can occur in the human body, but I also believe that no class of cases can become more quickly serious. These cases were referred to me in the ordinary way of professional routine and I dealt with them according to the conditions presented.

I would say to those of you who are especially interested that in the room of the pathological exhibit below, Dr. Watters has arranged a goodly number of photographs from many cases which will give you a fairly good idea of the various growths removed. One tumor showed here was an especially large one, weighing thirty-one and a half pounds. This patient made a most excellent recovery.

VAGINAL CŒLIOTOMY

FLORENCE N. WARD, M. D.
SAN FRANCISCO

It is well, in the midst of our work, to pause and glance over the field and determine the changes that have taken place; sometimes so gradual have been the transitions that we have hardly been conscious of them until by comparison we realize how radical they have been.

The scope of the vaginal route has enlarged until now it fairly divides honors with abdominal section, and the vaginal route is being utilized with advantage for almost all the lesions of the pelvis that necessitate the invasion of the peritoneal cavity for their surgical relief.

We have reached that point where in deciding the operative procedures to be adopted for a pelvic case, the first point to be decided is, shall it be attacked by the vaginal or abdominal route? And the time has now arrived where every gynæcological surgeon to serve the best interests of the patient must have the technique of vaginal sections as thoroughly his own as that of abdominal section.

The day of the enthusiastic adherence of one route to the exclusion of the other is passed. In each case, now must critical judgment be exercised and the route chosen according to the necessities of the individual case.

The vaginal route is the natural approach for the lesions of the true pelvis, just as the abdominal route is the natural opening for the large and inaccessible pelvic growths that have become abdominal.

Vaginal cœliotomy received its first impulse at the hands of the brilliant French operators, who showed us their skillful technique and almost nil mortality statistics. They proved to us the possibility and feasibility of this route and made possible the developments that have since taken place. It is hardly ten years since the vaginal route was limited first, to hysterectomies, principally for fibroids or carcinoma and second, total ablation of the uterus and appendages for pyosalpinx, it being considered necessary to remove the uterus with the appendages to secure good drainage.

In this early work all observers were agreed upon certain results: *First,* the low mortality rate; *second,* the freedom from shock following the operation as compared with work by the abdominal route; *third,* the rapid and easy convalescence; and *fourth,* the immunity from pelvic distress enjoyed by patients afterwards, undoubtedly due to fewer peri-

toneal adhesions as a result of the lessened disturbance of the abdominal contents.

All of these points were most vital in recommending this procedure for favor with the result of the greatly increased scope for the operation.

Vaginal cœliotomy is now indicated for:

First: The treatment of pus in the pelvis; it is the route most frequently indicated.

Second: Exploratory incision in occult lesions of the pelvis, in sterility and persistent pelvic pain not yielding to treatment.

Third: Single and double salpingo-oöphorectomy.

Fourth: Conservative work upon the uterus as myomectomy; conservative work upon the appendages such as exsection of the Fallopian tube; resection of ovary; opening and draining of pus tubes; removal of small ovarian cysts or parovarian cysts.

Five: Operations upon the uterine ligaments for retro-displacements.

TECHNIQUE

Pus in the Pelvis:

In all purulent collections in the pelvis, be they gonorrheal in origin, puerperal or appendical, be the infection located in the pelvic connective tissue, in the tubes or ovaries or in Douglas' cul-de-sac, the easiest and safest line of attack is through the vagina.

The weight of experience, as shown by the voluminous literature that has appeared upon this subject in the last few months, is in favor of treating pus collection by vaginal incision whenever possible, instead of by the abdominal. The mortality rate has fallen from 15 per cent to 25 per cent by abdominal route to 2 per cent by vaginal, and without doubt it will be still more decreased by improvement in the technique.

It is more rational to drain at the most dependent portion of a cavity; for instance to drain the peritoneal cavity through Douglas' cul-de-sac rather than by an incision high up, by a route through important structures and in a direction opposed to gravitation, such as has to be done when pelvic abscess cavities are treated by abdominal section. And again, unfortunately, at the time of operation we cannot determine the virulence of the pus-producing organism and its effect upon the peritoneum. Nature walls off these pus cavities from the general peritoneal surface. In our efforts to relieve the patient we break down the barriers and present the general cavity for infection. Fortunately in the old pus collections, the pus has become sterile and but little harm is done—the patient recovers; but if the infection is a

mixed one or a streptococcus invasion, the result is not so fortunate for the patient.

The claim that the operation is an incomplete one by the vaginal method is not borne out by experience. Many cases are reported where the patients have recovered and the apparently hopeless diseased tubes have resumed their normal function without further surgical treatment. In case the patient is not wholly relieved by the vaginal section and drainage, the tubes can be removed at a later operation and with much greater safety to the patient.

I think there is not any condition that requires more nicety of critical judgment than a complicated case of pelvic and abdominal suppuration, as to which route to choose in its treatment.

The following case illustrates the difficulties that may be encountered and the wisdom in similar cases of approaching from above, when with large abdominal incision, free observation of the abdominal cavity can be obtained.

Mrs. G., age 32. Married seven years. Had never been pregnant. Last menstruation December 15, 1902. Her period did not appear in January at the expected time; two weeks later fearing she was pregnant, she passed a wooden probe into the uterus. This she repeated ten or twelve times at intervals of several days. She developed a pelvic peritonitis and suffered intensely until March 10, 1903, when she presented herself for care. Her pulse was 120; temperature 102 degrees. Examination showed the pelvis filled with an indurated mass, the uterus pushed to the left side of the pelvis and firmly fixed. From the cervix was pouring a foul-smelling bloody discharge. Two distinct solid masses rose into the abdominal cavity; that on the right midway to the umbilicus gradually merging into a still larger and higher mass on the left side of the abdomen. The patient was immediately sent to the Sanatorium. Curettement showed the uterus empty except for some decidual débris. The temperature rose to 103.6 degrees in the next two days and the necessity for more radical work was made apparent. The question then arose, by which route should the work be done; by the evidence presented, there was no doubt that pus formation was taking place. By vaginal examination, the whole vaginal vault was of stony hardness, the uterus pushed to one side and the normal anatomical relations lost; beside which the abdominal cavity was so greatly involved by the large tumor masses. All of these points favored the abdominal route, which was adopted. On opening the abdomen, a ruptured tubal pregnancy was discovered on the right side and a three-months fœtus was found free in the abdominal cavity, surrounded by organized blood clots. After extirpating the tube on that

side, a tube-ovarian abscess, the size of a small cocoanut was discovered on the left. By the thickened walls presented, it had evidently been an old pus tube that had been rekindled by the traumatic infection resulting from the patient's efforts to commit abortion. In its development, it had been pushed out of the pelvis, and at the time of the operation rested upon and was adherent to the fundus of the uterus. Its removal was followed by saline flushing and gauze packing. Thorough abdomino-vaginal gauze drainage was instituted and the operation brought to a close. Time of operation, forty-five minutes. The patient made an uninterrupted recovery.

Had the purulent collection been limited to one or both sides of the pelvis and confined to the true pelvis, there is no question as to the route to be chosen. Vaginal section would have fulfilled all the indications, as illustrated by the following case:

Mrs. H., age twenty-eight, married, one child. Previous health good. Missed one menstrual period, followed by severe flowing two weeks after the period should have appeared. The flow persisting, her physician curetted the uterus, without an anæsthetic and without any anti-septic precautions. This was immediately followed by a chill and temperature of 104 degrees. A septic fever, marked by morning chill and afternoon temperature of 104 degrees took place. The patient's condition steadily growing worse, her attending physician was replaced by another and I was called in consultation.

On examination I found the patient suffering intense pain in the left side of the pelvis, radiating to the back and down the left leg. The uterus was fixed and the left side of the pelvis filled with a large mass, exquisitely sensitive to touch.

Under the anæsthetic, the uterus was curetted, vaginal section was made, peritoneal adhesions separated, the pus excavated, the cavity flushed with saline solution and packed with gauze. This was followed by immediate relief from pain and a gradual drop in temperature to normal, and a perfect recovery.

This is the type of case that experience has shown is the most suitable for vaginal section, and it is in these acute cases that we meet the most virulent form of invading micro-organisms that so often produce the fatal general septic peritonitis when operated by abdominal section.

The rule can be formulated then that *the vaginal route becomes the choice for all acute cases of pyo-salpinx or acute septic or puerperal cases where localization has taken place on one or both sides of the pelvis.* It yields most brilliant results and saves many a life that would be sacrificed by the other method.

TECHNIQUE

The tecnique is as follows: After thorough cleansing and curetting, the cervix should be seized by strong traction forceps and lifted well toward the pubes, a free transverse incision is made in the posterior vaginal fornix close to the cervix, the edges of the wound are grasped by forceps and separated. The cellular tissue is divided by blunt dissection until the peritoneum is reached. Douglas' cul-de-sac is then opened freely to the size of the vaginal opening. The forceps then grasp the edges of the peritoneal as well as the vaginal margins thus separating the peritoneal surfaces and permitting a good inspection of this part of the peritoneal cavity. Adhesions are separated by the finger, pus tubes or sacs evacuated, the surfaces flushed with saline solution and the cavity well packed with sterile or iodoform gauze which is allowed to remain four or five days, depending upon the condition of the patient. There is always a relief of pain and a drop in the pulse and temperature rate. After the fourth or fifth day, I remove the gauze, a strip each day with the patient in Sim's posture with Sim's speculum inserted, until all the strips have been removed, when I find the cavity has contracted down well and the healing progresses rapidly.

HYSTERECTOMY

The status of hysterectomies for fibroids has changed but little the last few years, except to make more clear the line of demarkation between those that should be removed by the vaginal and those by the abdominal route. With our improved technique and better statistics by the abdominal route, there is no reason why we should attempt the removal of uteri rising to the umbilicus or those fixed high in the pelvis where it is impossible to seize the cervix and draw the uterus well down for the necessary incisions and enucleation per vaginam. In multiple fibroids subperitoneal and intermural, of not too great size, I always utilize the vaginal route, performing hemisection and morcellation of the uterus is too large to be delivered in toto. Vaginal cœliotomy should always be chosen for the removal of the carcinomatous uterus. When the disease has extended beyond the uterus itself and involves the deeper structures of the pelvis and the lymphatics, the case has become hopeless and grave mutilating procedures with their greatly increased mortality is not indicated.

CONSERVATIVE PELVIC SURGERY

It is in the conservative treatment of the lesions of the true pelvis that I think the brilliant future of vaginal cœliotomy lies. By the vaginal route, I am now doing much of the conservative work upon the

uterus, tubes and ovaries that I have hitherto done by the abdominal route. The results have been most gratifying, not only in the easier convalescence of the patient, the more rapid recovery, but equally perfect results.

The great difficulty hitherto has been the inability to secure sufficient working space, but by improved technique, better specula and larger incisions that difficulty has been overcome in a large measure. After careful measurements and experimentation, I have devised my own specula consisting of one anterior, one posterior, two lateral and one long anterior blade for deep anterior dissection; the length, width and shape of each blade are so planned as to expose freely the vaginal vault and yet by their presence not to take up unnecessarily most valuable space.

INCISION

I prefer the anterior T-shaped incision as advocated by Mackenroth, J. Riddle Goffe and Webster. First, the transverse incision is made at the vagino-uterine junction the full width of the cervix, then the blunt dissection; the bladder is separated from the uterus until the peritoneum is reached. A longitudinal incision is then carried through the length of the anterior vaginal wall to the middle of the transverse incision; the bladder is carefully dissected away on each side until a good working space is acquired. The peritoneum is entered and carefully separated laterally, thereby giving a large working space for the uterus and appendages to be delivered into the vagina for whatever work that may be necessary to be done upon them. As a rule, if the incisions have been free enough, the middle finger is readily passed over the fundus of the uterus. Adhesions are separated and by releasing the traction upon the cervix it slips back into the sacrum and the finger readily delivers the uterus through the vaginal opening.

If myomectomy is to be performed, both anterior and posterior walls are in plain view for whatever work there is to be done upon them. The appendages can be drawn out, first one side and then the other. They are in plain sight and easily accessible. I have performed resection of the ovaries, exsection of the tubes, removal of diseased tubes or ovaries, and then as a final step corrected retro-displacements by shortening the round ligaments thereby bringing the uterus into its normal position. After the necessary work is completed, the uterus is returned to the peritoneal cavity, the vaginal and underlying tissues readjusted and the incisions closed by catgut sutures. It is remarkable how much can be done at one sitting. I recall one patient upon whom the following operations were performed: The patient was unable to walk or stand, owing to severe pelvic distress. She

had an endometritis, a retroversion, with prolapsed and adherent tubes and ovaries and a laceration of the peritoneum. After a preliminary curettement, I made the usual amenon vaginal incision, entered the peritoneum, broke up the adhesions which covered the fundus and posterior walls of the uterus, resected the right ovary, removed part of the right tube which was occluded and thickened, lifted out the left tube and ovary from its bed of adhesions and found that they were so badly diseased that I removed them. Then I looped up the round ligaments and stitched them each to each cornu of the uterus and completed the work by a perineorrhaphy. The patient recovered from the anæsthetic well, had very little discomfort, pulse remained between 70 and 80. She had a rapid convalescence and—except for the consciousness of the perineal sutures, could hardly believe she had undergone any surgical procedure.

EXPLORATORY VAGINAL SECTION

One very important measure that I think will be utilized much more freely in the future is the exploratory vaginal incision for the palpation and exploration of the peritoneal cavity in cases of occult pelvic lesions and in sterility. It can be done so readily and quickly and leave no scar to show what has been done. Besides which, patients always consent much more readily to its adoption than an abdominal section. We all know how very different pelvic lesions are when inspected to what they seemed on palpation so that sight and direct touch will do so much to clear an otherwise occult case.

In sterility, I believe the occlusions are resident just as frequently in the tubes as in the uterine canal. It may be peritoneal adhesions that distort and twist the tubes preventing its normal functional activity as well as adhesions that may bind down the ovary. Inspection of the appendages and relief of any pathological conditions should be an accomplishment of dilation of the uterine canal whenever it is adopted for the relief of sterility.

For the examination and divulsion of the tubes, I use a shortened set of flexible bougies from five to ten (French scale) and if the point of occlusion cannot be overcome I resect the tube above the point of stricture, stitch back the cut edge of the mucous membrane and adjust it close to the ovary, thus securing a patulous canal from the ovary to the cervix.

In conclusion, there is no doubt that our work and results are proving the great value of vaginal cœliotomy. It is the operation of the future for all the lesions of the true pelvis and by its safety and simplicity, we shall all be able to treat surgically many of the cases that are not now willing to be subjected to abdominal section.

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DISCUSSION

J. H. CARMICHAEL, M. D.: When I read the title of this paper, Vaginal Cœliotomy, I expected a gentleman was going to read it. I think the term cœliotomy in this place is misapplied. I think the term cœliotomy should be left to an opening of the abdominal wall, and in referring to the operation mentioned in the paper we should use the term vaginal section. At least I should not use that term if I referred to cases treated by me in such a manner as is described by the essayist. Celiotomy means cutting through the abdominal wall; that is the definition given in every dictionary that I have consulted.

H. F. BIGGAR, M. D.: Whatever Dr. Florence N. Ward does she always does well, and has given us a very valuable paper with unusual results in difficult cases. I believe myomectomy is not alwavs the best operation, for the reason that it is not always curative. Extirpation of the entire uterus is the ideal and conservative operation. Formely I believed that myomectomy was *the only* operation, but I now remove the entire uterus for the same conditions. In a few cases of myomectomy I have been necessitated to again operate for the reappearance of tumors, which have developed in the remaining stump. That was why I asked Dr. Emerson if he left any part of the cervix, and if there were any return of the growths about the stump. There are conditions where myomectomy is preferable, but on general principles you are justified in extirpating the entire uterus.

The vaginal route has restricted limitations. I now prefer the abdominal route for the same conditions which I formerly did by the vaginal method, for by the abdominal route we have better opportunities to see the lesions and then decide what is necessary to be done.

O. S. RUNNELS, M. D.: This is a very large subject, and it reaches into so many fields of experience and opens up so much opportunity for thought that I hope there will be a very full discussion. You know, before we became surgeons, it was the hardest thing of our lives to keep from becoming routinists. It was so easy to learn the use of a few remedies and to prescribe them in almost every case without sufficient thought and without looking up the indications for the prescription and thus getting the best remedy in the given case. And I believe that it is a very common fault with surgeons to get into the way of doing things and to do them about the same way every time. Of course, that is not the way to advance and grow. I am not lodging such a charge against Dr. Ward at all, for I know that she is on the frontier of experiment and experience. We have all learned to respect her opinion and to admire her acquirements and achievments in this field. I have no depreciating remarks to make in any way concerning her paper, but only the highest praise. She has voiced some opinions, however, that sometime ago I felt like voicing, and I did voice them, perhaps not in a paper, but I have said to many, and to myself, that the vaginal route is *the* route for the most of the pelvic ailments, and that I believe it will be chosen more often in the future, than the abdominal route. Well, I do not feel that way to-day. I have come to know that many things can happen in the abdominal cavity that can not be discerned by vaginal examination; that you can not determine without the light of heaven being thrown upon them, before you can decide intelligently just what is the better course to pursue; you must have such information, such knowledge as will enable you to get the best results, or a perfect cure. We now realize that many things ought to be known in all these cases that come to us, before we attempt to operate. We recognize that degeneration may be going on that without vision would be impossible to discover. We know there are degenerations of the ovaries and of the tubes in many of these cases—together with other complications, and I used to be satisfied with doing this work through the vagina. But we realize more and more that all these complications are a part of the problem. We may find a degenerated appendix and intricate adhesions as well as tubercular processes, which we can not reach and properly handle by the vaginal route.

I had an eye-opener on this subject very recently. I was called to see a case at 7 o'clock, p. m., in consultation. It was the eleventh day of appendicitis. She had developed a temperature of 104½ degrees; a pulse of 120 and was delirious. There was only slight tumefaction in the right iliac region, and there was no evidence discernible of pelvic complication. I said it was late in the dav of hope and that nothing probably could be done to save her; but the surgical duty was plain. Nothing but an abdominal section would do in this case—if, indeed anything would do. In about two hours we were within that abdominal cavity, only to find the intestines a mass of adhesions and the abdo-

men full of pus. There was general suppurative peritonitis, with adhesions of the intestines to each other, to the abdominal wall, to the uterus and all the organs. There was a perforated appendix, with cystic degeneration of the ovaries and pus-tubes, of which there was no indication before the abdominal opening was made. These were removed and drainage per vaginam, as well as through the lower angle of the wound was made with the wick or gauze drain and otherwise dry treatment.

I am happy to say that the woman is living, and though still in the hospital is practically well. And so with regard to many of these cases that I used to work upon by the vaginal route, in the removal of uterine tumors and all that. I look back upon them now and really consider some of them as the most remarkable experiences of my life; and yet with the same cases, under the same circumstances I would not care to do the same thing again in view of the uncertainty of diagnosis and the necessity of knowing what is going on above. I prefer to know exactly what the situation is and what I have to deal with.

So far as the incision for exploratory purposes is concerned that is a very insignificant matter in view of what may be required. I do not believe an abdominal exploratory incision is extra-hazardous. We know that we can make a hundred such incisions with a hundred recoveries. If thus we can throw light upon our problems that will enable us to do our work more intelligently and safely, it is certainly the better thing to do.

While many of these cases are exceedingly feasible and advisable by the vaginal route, yet there may be just these unknown elements to the equation in some of them, that you must have knowledge of in order to succeed and that you may not be able to learn about before operating through the vagina.

I do not disparage the paper at all or make question that the vaginal route is the route of election sometimes, but we must have a judicial frame of mind with us all the time and be ready to do one or the other operation as called for without favor or fear. I believe as time goes on we will do more, instead of less, abdominal exploration

E. H. Pratt, M. D.: I did not want to speak to this Society, but I do not wish this paper to go by without another word. Sometimes you light a fire, it makes a blaze for a short time and then goes out; again you light a fire, putting on more substantial fuel, and it lasts for a much longer time, and so it is with papers and their disputants. I consider Dr. Ward's paper one of the most scientific and readable papers ever read before this Association, and I want to pay her this compliment, as she is one of the master-builders. Whatever subject she takes up, or whatever specialty she undertakes, or whenever she presents the stone of truth before this Institute, or any other, she fits it right into place and you do not have to hew and cut and chisel to make it fit. Dr. Runnels' remarks upon her paper struck me as being undeserved. He showed his lack of appreciation of what Dr. Ward said in her paper. Now she stated, and she did not need any of Dr. Runnels' definition of her position at all, that some of her work had been done by way of the vaginal route, but she did not take the position

that it was to be preferred to all other routes, or to any other route. She aroused no antagonism in her paper. The first thing she said was that one should go unprejudiced to a case, and never go either way unless you are prepared to go both ways. She is just as much of a laparotomist as Dr. Runnels, and he is just as much of a vaginal hysterectomist as she is.

I would like to take exceptions to the first criticism that was made by Dr. Carmichael about that being the correct title of this paper. "*Celio*" means *belly*, and *temnein* means *to cut*. Thus we have *latero*, meaning side, and the Greek term *temnein*, meaning to cut, and refers to opening the side. Anything that penetrates the abdominal wall is properly cœliotomy. Dr. Carmichael has too narrow a conception of the abdominal wall. He forgets that there is one corner of the human body where an abdominal wall is greatly needed. If it were not for the abdominal wall forming the pelvic floor, I would like to know where the contents of the abdomen would go. And the vault of the vagina is just as much a part of the abdominal wall as the side or the center of the abdomen is, and when Dr. Ward enters the abdomen through the vagina for the purpose of abdominal exploration she is doing cœliotomy as legitimately as if she entered through the skin. Cœliotomy is not confined to skin work, and does not involve the skin; it means the abdominal wall, and anything that penetrates the peritoneum and goes into the abdominal cavity for exploratory work, is from what I know of Greek and Latin terms, cœliotomy. She was not only not confined to the abdominal wall in her paper, but I appreciate the delicate distinction she made, the originality of her genius that made her use the term cœliotomy with the vaginal route. Because the term means for a certain purpose, and she meant it for abdominal exploration. She wanted to call your attention to the fact that exploration of that part of the abdominal cavity is cœliotomy just as much as when it is entered in any other part of the wall, and she wanted to say, and did say, that it is a route for exploring the abdominal cavity which is not in common use by gynecologists.

I would like to direct your attention to the fact that what Dr. Ward has been talking about in her paper I have been doing for many years. I just want to tell you of one case, and then I am done. I had the honor of being requested to operate upon a patient who had been treated by another physician before a class in orificial surgery. It was a little humiliating to the doctor, because he was an old-school man, and did not like me a little bit. He wrote me a letter saying: "Doctor, do not consider this letter as an endorsement of your theories. We recognize that you have surgical ability, and I want to know if you will perform vaginal hysterectomy for me before Dr. Pozzi, of Paris, France." He is my friend now. I replied that I would. Some of the gentlemen here to-night were present, and if I do not tell this story straight you can correct me. His honor (the Chairman) was present on that occasion, and I think Dr. Green was also. I am not sure whether Dr. Runnels was there. The patient was a little woman from Boston, a minister's wife. She came wearing a pessary, a Shannon, or a mackintosh supporter. If she had not worn that supporter she would have

had procidentia. There was retroversion; there was cystic degeneration of the cervix; there was laceration of the cervix, and there was a small fibroid tumor in the womb.

She did not want hysterectomy unless it was necessary, but if it was, then it was all right. So we sat down to the case. As I said, there was laceration of the cervix and we slit the cervix and removed the plugs from the tissues surrounding them and amputated the end of the cervix. Then I worked my way into the abdominal cavity in front of the uterus, working until I had into the peritoneal cavity an opening large enough to introduce two fingers. I then turned the uterus upside down, bringing the fundus out through the opening. When I got the fundus out the ovaries dropped down and I pulled them out, one by one. I asked Dr. Pozzi if he called them normal, and he said he did. I replied that I thought so too, and we left them. Then I straightened the uterus until it stood perpendicular in front of the vagina, and then I was ready to deal with the tumor. I split the uterus right down the middle, half way down, until it disclosed a submucous fibroid. I dissected the fibroid out, and then closed the wound in the uterus.

In replacing the uterus I said to those around that I would show them a new operation for the correction of retroflexion. This uterus tipped backward, and I wanted it to tip forward, resting on the bladder, as is natural, and so I am going to fix its attachments to the bladder and these must be fixed to the posterior muscular-wall coat of the bladder. So I took up the margin of the peritoneum and instead of reuniting way down in the middle of the uterus, where it had been, I attached it to the fundus of the uterus, all around. Then I stitched the anterior surface of the uterus to the posterior muscular coat of the bladder. Then, after this was all done, the uterus was replaced in somewhat the same manner you turn the finger of a glove, and closed the vaginal wound and the work was done.

I want to tell you the history of that case: that woman never had a temperature of over 99.5 and I never touched that woman again. She went to Boston to live and three years afterwards she came that long distance, to Chicago, to thank me for what I had done. During the past year she has given birth to a child and has not had to have any other surgical work done.

There was one point I would like Dr. Ward to bring out in her discussion—I would like her judgment on it—if sometimes it is not better to make an exploratory incision by way of Douglas' cul-de-sac, where you can turn the uterus backward, and curette it and at the same time get at the ovaries and tubes. Sometimes you can get the Fallopian tubes down, if they are loose enough, without drawing the ovaries down. You can not do resection of the tubes in this way without first finding out where the structures lie upon which you wish to operate. But in making these exploratory incisions by way of the pelvis it requires as much judgment, if not more, to determine where the cut shall be made than in making an exploratory incision in any other part of the abdomen. In some cases it is better to make the opening in front of the uterus, and then in other cases it is better to be made posteriorly.

LIBBIE MUNSEY, M. D.: I did not hear Dr. Ward's paper, but I know from the nature of Dr. Ward's work about what that paper was, and I want to add my endorsement to the endorsement of that special line of work. For over eight years, perhaps ten years, I have been doing a great deal of work through the vagina which most of the surgeons in our part of the country do by the opening of the abdomen, and every year I become more and more enthusiastic over the vaginal route for that work.

N. M. COLLINS, M. D.: I am not to be classed among those who possibly go by way of the vaginal route too often, if anything. What Dr. Ward said in regard to mortality I have proven in a number of operations. She says the mortality is not over two per cent. in removing pus accumulations from the pelvis, and I have proven that for a good many years. As far as the choice between the anterior and posterior *cul-de-sac,* I believe, as Dr. Ward says, that all pus accumulations are better taken from the posterior *cul-de-sac.* Of course, in the plastic operation on an ovary, especially if you went through the posterior *cul-de-sac,* you would probably do just what you would not care to do, because you would have a prolapsus afterwards. In drawing it out to do the plastic work, you could do the work probably all right, but it would not stay down in the posterior *cul-de-sac* afterwards. I have been very careful not to pull down an ovary that I want to save. I have removed a great many when I was sure from the diagnosis that I would have to remove them from the *cul-de-sac.* The temperature hardly ever ran over 99 afterwards. I have also removed a good many small cysts in the posterior *cul-de-sac.* In some of them at least a quart of fluid was removed that way when it would come out as easily from the posterior *cul-de-sac,* tying it up and getting no shock whatever. In regard to the anterior *cul-de-sac,* I have used that in quite a number of instances formerly, but no so much lately, but for conservative work on the tubes and ovaries it undoubtedly has the choice of the two, and last evening when they were discussing extra-uterine pregnancy, a good many of those cases confirm your diagnosis. It is a very nice idea to open the anterior *cul-de-sac* before opening the abdomen, to make sure of the condition that you have. It takes no time at all to do it, and it makes a nice place for your drainage afterwards, which you usually want. You can close the abdomen anteriorly and drain through the posterior *cul-de-sac.* In regard to vaginal hysterectomy, the mortality, as she said this afternoon, is practically nil, anywhere from half of one per cent. to one per cent., done by the vaginal route.

C. E. WALTON, M. D.: So far as I have observed, this discussion upon the vaginal route and the abdominal route is a good deal like a discussion upon appendicitis. In treating appendicitis in medical cases treat them medically; in surgical cases treat them surgically. Now, if you will take the time to analyze the discussion of this subject this afternoon, you will find that it resolves itself into simply this: When you have those cases that ought to be operated through the vagina, operate them that way; when you have those cases that should be operated only through the abdomen, operate them in that way. That is all there is of it.

J. C. Wood, M. D.: My friend Dr. Walton confirms the statement made by that great and only philosopher, Josh Billings, in which he said, "There is just as much difference in some people as there is in anybody."

Florence N. Ward. M. D.: I have nothing more to say than has been said in my paper, except to call attention to the many possibilities of the vaginal route in dealing with a simple lesion of the pelvis. There is one point that Dr. Pratt spoke about, and that is about the posterior vaginal incision. I think in many cases we may facilitate the work through the anterior vaginal incision by making a supplementary vaginal incision when many adhesions exist in Douglas' *cul-de-sac*. The posterior incision then can be utilized for drainage if the adhesions have been extensive, through the pelvis. The pelvis drains better through the posterior fornix than through the anterior.

GALL-STONES AND DISEASES OF THE BILE-DUCTS

H. F. BIGGAR, M. D., LL D.

CLEVELAND

There is no one class of systematic diseases that more fully and richly repays the student than that chosen for this occasion. There is none that calls into keener exercise the knowledge of physiology, physiological chemistry, the laws of blood and nerve supply, all in the abnormal as well as normal aspects, than this. Nor is there one, in either its medical or surgical views of successful treatment, that demands more rigid exactness of differentiation of mechanisms involved, or the means to be employed to secure satisfactory results, than the gall-bladder and bile-ducts.

There is scant opportunity for a treatise on the subject, therefore I do not undertake it; but shall only give consideration to salient features, those lying in the way of the busy practitioner rather than in that of the specialist. And setting for myself the limit, let it be that of affections of the gall-bladder and its ducts, and of these again, cholecystitis and cholangitis, inflammation of the cyst in one case, and of the ducts in the other, and of a chief result cholelithiasis.

It will also be observed that I do not confine such consideration to either medicine or surgery as such; for the one might forever find limitation falling short of cure, and the other deal only with a last fixed stage, a hopeless incident. It is not that I discourage medication,—our best hope may lie there; nor decry operative measures in those cases demanding the knife; but I do plead for thorough and intelligent treatment of the same cases in their early stages with either medicines or the knife, or both in full view and easy reach.

With a warning that the surgeon's knife may be too frequently used, an eminent surgeon says: 'The domains of medicine and of surgery can never be separated. It may fail to gratify the physician to see surgery obtain quickly and by a few strokes of the knife what medicine had failed to accomplish, but, on the other hand, has not the physician to stay, and with advantage, the hand of the surgeon? The immunity with which the most formidable operations are now performed has given a confidence—might I not say a recklessness—possibly which renders the staying hand of the physician of priceless value. Especially is this true, when, as it sometimes happens, the inexperienced surgeon hurriedly resorts to a tentative operation to establish a diagnosis where one more experienced would see no reason for the procedure. I have more than

once observed the meddlesomeness of a surgeon to be in indirect ratio to the measure of his experience."

It is their duty to become intimately acquainted with causes and clinical history and physic-chemical variations in these diseases, and their differential and specific tissue changes, that insure the positon of vantage.

There are some facts in the surgical history of cholelithiasis, or gall-stones, that are suggestive. The era of gall-bladder surgery began in 1879, when there were in England one hundred and seventy-two deaths. In 1889, after ten years' experience, there were four hundred and eighty-eight fatal cases. Kehr of Halderstadt, who has performed more operations for gall stones than any other operator, gives a series which shows that a certain per cent demand reoperation, either from the "first operation not being complete or to a return of the disease." It is a well known fact that after operations for the removal of biliary calculi other stones are frequently passed, and even after the removal of the gall-bladder stones have been found in the bile ducts. In adults one out of ten have gall stones, of the old one out of four, and four times as many women affected as men. Only one of every thirty eventually requires the knife.

It is concluded, therefore, that while in the simplest cases the mortality may be as low as one (1) to three (3) per cent, it is in complicated cases as high as five (5) to thirty (30) per cent. In the experience of Mayo Robson a published series shows sixteen and six-tenths (16.6) per cent of recoveries.

In view of such a record, many of the cases being without doubt not in the class of last resort, we may carefully heed a remark of Treves, that "the operation for gall-stones is an excess of zeal on the part of some of our colleagues." At all events we are impelled to return to a more searching review of the conditions the premonitions of which are gall-stone formation, and thus on to the radical cure of the diseases of which they are the expression.

What is a gall stone? A crystalline, friable mass, composed of cholestrine, lime, iron and various bile salts and resins, precipitated and caught up and bound together in a matrix of albuminous material.

How formed? Irritation of the mucous surface of gall-bladder, hepatic, cystic and common ducts, their obstruction by swelling or plugs of mucus causes retention of liver products, and therefore the precipitation of their solids with excess of cholestrin; which caught up as above described become inspissated and solidified in the familiar concretions.

Their location, either as sand or larger stones, is in either duct or gall bladder or ampulla of Vater, a dilatation of the common and pancreatic ducts at their entrance into the duodenum. Outside of the gall-bladder, the cystic and common ducts are the most frequent locations of impacted stones. If there is permanent obstruction great distention occurs, and the more persistent the impaction the greater the liability to ulceration and possible perforation into the adjacent organs. The gall-bladder may be actually inflamed, where there is danger of occlusion of the cystic duct.

The causes are indigestion, intemperance and worry; and it is further predisposed by disproportionate amounts of fats and animal foods —beginnings of menstruation and pregnancy are prolific of these cases.

The diagnosis in simple cases is easy; but to differentiate in complicated or obscure cases it may be very difficult. The shape, density, position, condition of superficial veins and intestinal canal, all demand consideration. One point I must not fail to notice: A distended impacted gall-bladder can be distinctly felt between its normal position and the umbilicus; and here it swings as from a fixed point in the arc of a circle, convexity downwards. This is diagnostitic. When the diagnosis is doubtful we need not hesitate to resort to exploratory operation, for then no doubt can remain and it is attended with comparatively little risk.

The greatest difficulty presents itself in inflammatory types of the disease. The most prominent are *cholecystitis* of the gall-bladder, and *cholangitis* of the ducts, generally due to some infection; but when concretions are also found, these types distinguished as the non-calculous and calculous forms. The type may be catarrhal, suppurative, or phlegmonous; and may result in gangrene, perforation, and localized or general peritonitis. There may be repeated attacks.

In cholangitis the type of inflammation may also be catarrhal, suppurative, phlegmonous, the results similar to the calculous form. If impaction is in the cystic duct there may follow gall-bladder dropsy, or infectious inflammation which runs an ordinary course. If in the common duct, it is distinguished by jaundice of more or less intensity which persists for a year or more, splenic enlargement, slight or no enlargement of the liver and gall-bladder, with or without ascites. The inflammation, at first catarrhal, becomes chronic and thus passes into the suppurative type for the contents makes a fertile culture medium. Osler recognizes three classs of cases: "(1) Complete obstruction with mild catarrhal cholangitis; (2) incomplete obstruction with a severe grade of catarrhal cholangitis in which recovery is possible; (3) incomplete obstruction with 'suppurative' cholangitis in which death is inevitable."

Cholecystitis and cholangitis of catarrhal type may be present with or without jaundice, but is usually accompanied with cholemia and increasing leucocytosis resulting in toxemia.

Pyloric stenosis is differentiated by the deficient motility of the stomach and rejection of food.

If an enlarged gall-bladder can be palpated when jaundice is present, malignancy or internal pressure may be diagnosed. But if jaundice is present with a contracted bladder gall stones are probably in evidence.

Malignant growths have the pain, wasting cachexia, anasarca so characteristic; cholelithiasis presents a history of repeated attacks, pain, jaundice, vomiting, and often tumor formation. At times stones may be palpated, or crepitus felt when many are present.

Lymph nodes, as described by Hartman, may so form about the ducts as to cause obstruction, and cannot be differentiated from new growths.

Pain and tenderness at Boas' point at the costal border of the twelfth dorsal vertebra is a very important symptom of all diseases of the biliary passages.

Thus the difficulties of differentiation are strongly emphasized, and the more so as complications arise. In either form there may be required surgical exploratory measures to make the diagnosis certain.

Differentiation must also include appendicitis, which the symptoms may exactly simulate; acute intestinal obstruction, since pain and tenderness may not always be in the region of the gall-bladder; renal colic, gastralgia and enteralgia, are usually so defined by location and other characteristics as to make their diagnosis easy, but in rare cases negative symptoms and discharges of urine and feces will have to be depended upon. Note should be made of pancreatitis. Pancreatic calculi are rare and ordinarily diagnosed as gall-stones. There is no jaundice; the pain due to expulsion of the stone is colicky, but is located at the left costal border to the back, with glycosuria and fatty diarrhea. "If calculi composed of calcium carbonate or phosphate can be recovered from the stool after the attack the diagnosis is confirmed."

What does surgery offer in these cases? Something, it is true, but in view of radical cure it is inadequate. They are essentially nonsurgical. Exploratory procedure may clear up a doubtful diagnosis; or removal of impacted stones, mere products, may relieve suffering and prolong life; in suppurative inflammation the presence of gall stones is not inconsistent with long life; as shown in most mortem records where they have been found in gall-bladder and ducts in eighteen (18) to thirty-six (36) per cent of the cases. Kehr states that only

one in thirty having them, ever suffer from biliary colic or other symptoms of the disease. Besides this, an experience of a third of a century confirms the statement that a large number who have so suffered have recovered with medication and without surgical interference.

A modern authority has said: "It is evident that it is not gall stones themselves that constitute the disease; but the inflammatory condition from which they originate and with which they are so often found associated. Some of the ablest surgeons have even admitted that, if all inflammation is subdued and the stones kept at rest, the patient is as effectually cured as if the stones themselves were recovered; and furthermore that by the removal of inflammation and setting the stones at rest, is not only as effectual but more radical than anything that is ever likely to be accomplished by gall-bladder surgery."

So I say, extirpate the gall-bladder if you will—it never was the initial factor of the disease, only an intermediary—and the disease remains active as before. Obliterate sac and ducts alike and establish new bile channels into the intestine if you can—but to what end? What step toward cure is gained? It is also to be admitted that the original disease either by infection or idiopathic, bile secretion still abnormal, faulty transformation of liver products—and therefore their precipitation still goes on. Surgery is more often palliative than it is curative.

Drainage of the gall-bladder which will also drain all the ducts will relieve the diseased liver and rest the mechanism of bile secretion and is therefore indicated in all these allied conditions, especially if infective or accompanied with progressive cholemia or toxemia.

However, notwithstanding the zeal of lesser operators which is counteracted by the conservatism of the more skilled, and the preponderance of successes at the hands of medical men, it still remains that cholelithiasis is a surgico-medical disease; surgical when the obstruction is imperative, a palliative measure, and medical when time and circumstances admit considerations of cure. Kehr has pointedly drawn the lines betwen one and the other, and I fully agree with him in every particular, both in respect to the medical and surgical treatment. He says:

"Medical treatment is indicated (1) in acute obstruction of the common duct as long as it takes its normal or favorable course; (2) in inflammatory processes in the gall-bladder, where they seldom or at least not too frequently recur; (3) in frequent attcks of biliary colic followed by the passage of, or still frequent and followed by no passage of stones; (4) in cases already operated upon.

"Surgical treatment is necessary (1) in acute purulent cholecystitis or pericholecystitis; (2) for adhesions between gall-bladder and intes-

tines, stomach or omentum, provided they cause serious trouble; (3) chronic obstruction of the common duct or of the cystic duct—dropsy or empyemia of the gall-bladder; (4) for all these manifestations of cholelithiasis that beginning in a mild form in their further course resist all treatment, and through constantly recurring pain or other symptoms deprives the patient of all comfort and renders the pursuit of his occupation impossible; (5) purulent affection of the ducts and abscess of the liver; (6) in perforation through the walls of the biliary passages and peritonitis; (7) for the gall stone morphia habit."

It becomes clear enough, then, that cholecystectomy should not be performed as routine practice for gall stones. It does not prevent the formation of stones in the ducts, does not increase the efficiency of drainage, but does involve added risk. It is indicated, however, in gangrene, sepsis, malignancy and new growths.

The means used to accomplish a cure are internal medication and diet, mainly.

We undertake (a) to stimulate the cells of the liver; (b) to stimulate the muscular fibers of the gall-bladder and bile ducts; (c) to relieve the catarrhal or congested state of the orifices of the common bile ducts; (d) to remove from the intestines substances which have been passing into the portal vein and depressing the action of liver cells; (e) to stimulate the intestinal glands which drain the portal system; (f) to control inflammation and promote absorption of inflammatory deposits.

It is not necessary to restrict the diet "when there is anything wrong with the liver." for by so doing "there is a decreased flow of bile and the bile secreted instead of passing directly into the duodenum, is stored up for future use in the gall-bladder when there is a long interval between meals. This applies to the earlier stages of gall stones. In later stages, when there may be obstruction at the pylorus or dilatation of the stomach this injunction does not necessarily apply."

"In the early stages of gall stones the patient should have frequent and hearty meals; and in this place late suffering may be prevented by late suppers."

The diet should therefore be generous. It is a mistake to lay on limitations and restrictions. The patient almost always craves acids and fruits; other things equal let him satisfy his craving. It is the same with nitrogenous foods generally. The object is not to suppress free flow of bile, but to encourage it, thereby to wash out the biliary channels.

The internal remedies naturally arrange themselves into groups. The first, applicable to the disease proper, is composed of *china, ceonanthus, chelidonium, hydrastis,* and *podophyllum.* Each, as indicated, should be persisted with until results indicate change.

Another group, standing midway between the persistent conditions and exacerbations or other acute incidents, includes *dioscorea, berberis, carduus, belladonna,* and *nux vomica.* In some cases the chronic condition appears to be favorably influenced by these drugs, in others not at all, even if symptomatically indicated. There more favorable action, however, may be expected in acute phases of the disease.

According to its physiological action, as well as experimentally, belladonna is a most excellent remedy for attacks of biliary colic, during the stage of spasm. Its dosage is determined by the effect desired. Drug effects are required to bring about relaxation of the circular fibers of the canal; contractions of which are responsible for obstruction and pain. Given internally, in doses sufficient to produce atropism if necessary—even to thirty minims of the tincture every hour, or until the throat becomes dry and the pupils dilated. Another method of administration is to apply extract of belladonna one drachm. iodine ointment (U. S. P.) one ounce, smeared on lint sufficient to cover the affected part. In many cases the attenuated drug is sufficient to relieve.

A third group partially or wholly palliative, are the following:

Olive oil with some is disappointing—possibly on account of impure oil, or too large doses. Give a tablespoonful of pure olive oil in a glass of hot milk at bedtime. It increases the flow of bile. Becoming glycerized *in situ* it relaxes the circular fibers of ducts and adjacent muscular tissues. For the same reason the efficacy of olive oil in stenosis of the pylorus and duodenum following ulcer or fissure of the stomach has been fully demonstrated.

Eunatrol, a combination of olive oil and soda, is said to be useful.

Durand's remedy, turpentine ten minims, and ether fifteen minims, may be worthy of trial. I have not proved it conclusively.

Muriate of ammonia, from five to fifteen grains, three times a day, is a most excellent remedy for diseases of the mucus lining of gall-bladder and ducts.

Sodium salicylate, sulphate, benzoat, bicarbonate, phosphate succinate and potassium sulphate, have all been advocated by various authorities.

Alkaline mineral waters are useful because "they antagonize the development of acid tendencies and aid in the solution of mucus."

Another explanation is that "for the time being an astringent has a soothing effect on the lining membrane of the biliary passages, relieves the spasm, and allows the stone to pass." "The Cure" at Carlsbad is

valuable, often very efficient. Another excellent water is that of Contrexéville, which if to be used for home treatment is better than Carlsbad.

Out-door exercise, horse-back riding, both judiciously controlled, are valuable adjuvants. Gymnastic exercises should be flatly forbidden. "Physical Culture" may have times and places, but not here.

GLEANINGS

The gall-bladder, except as a reservoir for bile, has no apparent use or function, and when removed gives rise to no consequences whatever. It is absent in rodent, camel, deer, elephant, ostrich and some fish. It has been found absent in man.

Bile is secreted by the liver cells. During periods of digestive repose it is forced into the gall-bladder and forced out again when digestion is resumed.

Cholesterin is present in the bile contained in the gall-bladder from one-tenth to one per cent. Is also found in the sputum, in fatty degeneration of the spleen, kidney, in tubercular tissue, carcinoma, sarcoma, infectious inflammation of mucous and serous surfaces and in pus.

Bacterial infection in numerous cases is the most promising theory of gall stone formation.

Catarrhal cholecystitis is due to the invasion by the colon bacillus. Gilbert in 1886 demonstrated their presence. In 1897 Mignot, Gilbert and Fournier produced gall stones by inoculation with the bacillus coli communis and shortly after with the bacillus of typhoid fever.

Biliary stasis of the bile ducts is the first factor in the formation of gall stones.

Many cases of enteric fever are followed by gall-stones.

Gall stones in the gall-bladder do not cause trouble unless cholecystitis supervenes.

After removing the gall-bladder stones have reappeared in the bile ducts.

Venous oozing during the operation or post-operative is a serious complication and possibly may be avoided by administering calcium chloride a few days previous to the operation. The dosage is twenty grains three times a day. It hastens coagulation.

For any hemorrhage the following formula is of great value:

℞ Normal saline sol 100 c. c.
Sol Gelatin (2½%) 60 c. c.

Mix and sterilize.

Sig: Inject entire quantity subcutaneously to control post-operative hemorrhage.

Post-operative pain may be due to adhesions. The early establishment of peristalsis may prevent adhesions. The morbidity following operations for gall stones is a strong argument that surgical intervention is not always curative.

The circulation is depressed during an atack of gall stone colic.

Phosphate of soda is often valuable—a drachm in a glass of water once, twice or even three times a day.

With some doctors gall stones are their "surgical benefactor."

Impaction of ascending and hepatic flexion of colon has been mistaken for a full gall-bladder.

The migration of gall stones the cause of the trouble.

The X-Ray has assisted me in the diagnosis.

May be mistaken for a floating kidney or appendicitis or pancreatic disorders.

Buttermilk, strained, good diet.

To a glass of milk add one-third teaspoonful of baking soda—shake twenty-five times; to this add one egg—one tablespoonful of Malted Milk—then shake fifty times. Drink three or four glasses a day.

A persistent inflammatory disease of the biliary passages frequently results in malignancy.

Cholecystendysis is a dangerous operation.

Murphy's modified button for drainage in cholecystotomy.

Murphy's button of proper size or Boari's button for cholecystenterostomy.

Cholecyst-duodenostomy relieves pancreatitis.

We have no single positive symptom indicative of gall stones and yet there is something about a case in which we suspect gall stones that, when operated on, confirms the suspicion.

The gall-bladder occasionally has a distinct mesentery formed by a double fold of the peritoneum.

Dr. David Thayer recommended China 6X given twice a day for five days, then every other day, then one dose every third day, then once a month.

Dr. John H. Clarke gives calcarea carb. 30X at fifteen minute intervals during the attack; if this fails, then berberis.

Gall stones are rare under thirty years of age—still children are not exempt; infants have been successfully operated.

I have seen a convalescent patient who had one thousand and sixty gall stones removed.

A tongue-like enlargement of the liver, Riedel's lobe, may be mistaken for the gall-bladder.

Hydrops of the gall-bladder due to the chronic obstruction of the cystic duct presents but few symptoms.

The gall-bladder may contain a retention cyst.

Doyen's method for resection-choledochorraphy.

When the stone is impacted in the duct, jaundice rapidly follows, with the usual yellow skin, and dark bile stained urine with the pipe clay feces.

Chills and fever occur sometimes with malarial regularity and due to gall stones.

In cholecystotomy the gall-bladder is sutured to the inner aspect of the abdominal wall and at the upper angle of the wound.

Stones are removed most quickly and safely by scoops of different sizes.

When the stone is impacted in the ampulla of Vater the transduodenal route is preferable.

The position of the gall-bladder is not constant.

The gall-bladder may be bifed hour glass shape, or absent, and the ducts merely fibrous cords.

Displacement of the gall-bladder may be due to outside adhesions to the stomach, abdominal walls, omentum, appendix or intestine.

Catarrhal conditions of the mucous membrane of the gall-bladder and ducts may be due to the presence of microbes and produce cholesterin and calcium salts.

Enteroptosis predisposes to the formation of gall stones; other causes are indigestion and constipation.

Jaundice is not necessarily associated with gall-stones, for the stone may not interrupt the flow of bile—its action may be ball-valve.

Lawson Tait has operated for gall stones and found only a cancer of the pylorus.

I have operated for appendicitis and found only the gall-bladder filled with twenty-seven large stones. And have operated for gall stones with the positive evidence of their presence and found only a pancreatic cyst.

Intuitive impressions must not be ignored by the surgeon or physician.

Milk should be sipped slowly and if the stomach rejects then add a few grains of carbonate and phosphate of soda.

Milk should be well shaken before taken.

When in doubt give full and if necessary frequent doses of castor oil to remove any suspicious impaction.

It is stated that seven-tenths of diseases of the abdomen have origin in the liver.

It is stated that gall stones are more frequently found in the insane than in sane women.

Inflation of the intestines per rectum may differentiate between a mobile kidney and a distended gall-bladder.

The pancreas is the next evolution of surgery.

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DISCUSSION

C. E. WALTON, M. D.: If I were disposed to be complimentary and somewhat careless in the selection of adjectives, I would say that this is a most masterly paper. I do not say any such thing. Dr. Biggar has not told us half that there is to be said about gall-stones. He has not told us half that he knows about gall-stones. He has not told us one-quarter that is known about gall-stones. Consequently, any paper that does not fill those requirements cannot be said to be a masterly paper. But he has furnished us with a very interesting paper, and one which will furnish us, possibly, a topic for discussion. Dr. Biggar never appeared to me before, until he wrote this paper, as a straddler. You cannot tell now whether he is in favor of medication for gall-stones or whether he is in favor of operative interference for gall-stones. I shall take up, however, some of the statements that he has made. He tells us, and quotes some authority, that the knife is too frequently used in gall-stones. Why doesn't he tell us something about the cases where the knife is used too seldom. He tells us that in certain conditions medicines are useful. I believe it. When you are not sure

whether you have got any gall-stones or not, fool along with medicines. When you are sure that you have gall-stones, better think about your knife. It is a matter, possibly, of information to be told that a certain proportion of people have gall-stones and never know it. What do we care about those people? It is the people that *have* the gall-stones, and the gall-stones are trying to get out, and raising the dickens, that calls for our interference. It is a matter of very great interest. He might have told us that the horse has no gall-bladder and that the ox has. That is a matter of pleasing information, but it is a matter of no importance when it comes to speaking of gall-stones. When your patient has gall-stone, how do you know it? You know it by the presence of gall-stone colic. You know it by the fact that he has called you out some time at night in dire distress, and he wants relief. What are you going to do? Are you going then to consider that possibly there is a pathological condition here, a pre-gall-stone condition, which may be reached by dioscorea, or china, or something of that sort? If you don't relieve that fellow's pain pretty soon he will say, "Doctor, you can go; I will get somebody else." Well, what is the condition there? Is that a condition for headaches? Well, possibly! It is not every case of gall-stone that calls for operation; we know that. We sometimes will diagnose a case which simulates gall-stone, which can be relieved temporarily; the patient never has another attack. We put down in our notebook that we treated J. L. T. at a certain time; he had gall-stone; we gave him china, or so and so, and he was cured. How do you know? You don't know anything about it. He had the symptoms of gall-stone. He might have had a mucous plug in the common duct or in the cystic duct, which gave you all the symptoms of the presence of a gall-stone. Then sweep out, and that is the end of it. It is well enough to use your medication when you have that condition which you suppose to be in inflammation of the gall-bladder or of the gall-duct; but when you have stones there, which are the cause of the symptoms, you have not necessarily a pathological condition, but you have a mechanical condition. The pathological condition has preceded it; the mechanical condition is there present. What are you going to do with it? The gall-stones may become quiescent, but suppose they do not? If you have recurrent attacks the only way to treat that condition is, not to palliate it, but use your knife and cure it. The paper says that frequently we have a re-formation of gall-stone. How do you know? There have been gall-stones found after an operation, but simply because the man that made the operation did not take all the stones out. How does he know they will be re-formed? As a matter of fact, if you take out all of the stones there will be very few cases of re-formation. How many ever operated a second time for a stone in the bladder? Once in a very small proportion of cases there is a re-formation; but very seldom. If you empty the gall-bladder and leave one hanging up there in the hepatic duct there will be a re-formation of the trouble, but no re-formation of the stone. The stone has been there all the time. I do not want to weary you too long about this, but I want to call your attention to some of the medications which have been advised. He talks about belladonna, a good deal like sending a boy to

the mill. Never send a boy to mill when you expect him to bring home more than a man can carry. You would better, instead of giving belladonna, give atropine, giving 1-50th of a grain of the sulphate. In this way you get quick effects, and your patient, who is suffering all the time, does not have to wait two or three hours in which you are firing into him 30-drop doses of an indeterminate tincture, hoping that he may be relieved before you get back. If he is not relieved in the course of two or three hours, then you will know that you have something to do with your knife. That Durand's mixture is a sort of fizzle. It will certainly be a fizzle if it is made according to the way Dr. Biggar told you, because that is not the way Durand made it, if Dr. Durand knew what he was talking about, and some people say they do not think he did. One great peculiarity about Dr. Durand is that he can cure all his cases with his method, but nobody else has ever been able to compete with him in the exhibition of the same remedy. The Durand mixture is composed of one part of turpentine and sixteen parts sulphuric ether. Once in a long while it will do some good, but simply because we know that chloroform, or ether, if put in a bottle will dissolve a real accommodating gall-stone after it has been taken out of the body and put in the bottle, but it does not signify at all that you can pour enough chloroform into a man's stomach to run up that man's cystic duct and dissolve his gall-stone. The only way to get rid of the gall-stones is to go in there with a knife and remove them.

J. W. HAYWARD, M. D.: While the younger men were talking, although they are subjects of great interest to me, I did not feel like opening my lips. But since the boys of my age are on the floor, I feel as if I might say a word. I have lived in the days when surgery was not thought of for the cure of gall-stone. I had the fortune to be under the tuition or with a practitioner who was zealous in whatever he undertook. He insisted that china would cure every case of gall-stone. I followed him. I had a large reputation in my neighborhood, extending from Maine to San Francisco. I have sent china to Chicago, to Detroit, to San Francisco and to a great many other places. I have seen gall-stones disappear under the use of china. I have this fact: I have the gall-stones. I know they came from the bowels. I know that patient after patient has never had another attack after the persistent use of it. I have in mind one now, who came from a neighboring city. I gave her china, nothing but china. She had had repeated attacks for over twenty years. I was called while she had an attack, simply because her physician was not there, and told her that she had gall-stones. "It cannot be," she said; "Dr. So-and-so," and "Dr. So-and-so," giving the names of eight different physicians, all of them better men than I, and yet none of them had mentioned gall-stones to her, therefore this could not be gall-stone. I said, "Let me have your urine." The next morning I was there, and in the afternoon again. The next morning I saw the husband coming up the hill, puffing, and into my office. I said to myself, "I have got to go again," but instead of that he said, "What was it, Doctor?" He had three beautiful specimens. He had obtained them in the very way I told him to, and I have them now at home. But there are cases where I have operated for gall-stones, and

I have cured them—no, I won't say that; I have seen numerous cases; I have given china; I have seen numerous cases where there had been repeated attacks, without having another attack after using china for a certain length of time. Atropine will generally, if given hypodermically, relieve the attack, but it does not prevent re-formation. I have seen gall-stone colic and gall-stone appear after the surgical operation, six months afterwards.

DR. WALTON: What is the life of a gall-stone?

DR. HAYWARD: I do not know, sir.

DR. WALTON: I thought you did not.

DR. HAYWARD: I do not know, sir; but I know pretty nearly the length of the gall-duct. Now, I think medicine and surgery are handmaids. They should go together. The surgical operation does not prevent the formation when the condition which produces the gall-stone is present. Notwithstanding the scalpel may be in the left hand of the patient or in the right hand of surgeon. He may open the gall bladder and he may take it out, and yet the condition which produces the gall-stone is not removed. I say the thing to do is to remove the gall-stone and then give them china.

A MEMBER: What strength?

DR. HAYWARD: I do not think it is so material what the strength is. I have never given it lower than the third decimal. I believe this will do just as well.

A MEMBER: Dr. Thayer gave this?

DR. HAYWARD: Dr. Thayer was the physician to whom I referred.

A MEMBER: He gave the sixth.

DR. HAYWARD: He gave from the third centesimal to the two hundredth; that is, selecting one dilution and giving it for a time, following it by a higher and still higher, and going back again to the lower, and so dropping back and forth. I guess that is a pretty good way to do.

I. O. MOSS, M. D.: I have been somewhat interested in this discussion on gall-stones, not only with the admirable paper, but otherwise. But so far as the removal of gall-stones is concerned, I think the same conditions that produce them the first time might reproduce them. A number of years ago in our town there was a man who had suffered severely two or three years with gall-stones. They sent to Boston, to the city in which we now sojourn. Dr. Richardson, a surgeon of quite a little fame, came down and operated on that man. He removed three or four large gall-stones and cleared out the gall bladder entirely; we have no doubt about it. I had a little conversation with his brother following that, and he said: "The gall-stones are removed; he never will have any more trouble." Within six months of that time he was attacked with gall-stones, and went to Dr. Richardson of Boston. Dr. Richardson did not consider it necessary to operate a second time. He sent him off on the Atlantic, saying he thought he would give him the benefit of a voyage. He traveled down to South Carolina, and was taken with another attack. He went into port there, and he died the

same night. An examination of the cadaver in the dissecting room at the college showed that the gall-bladder was literally filled with gall-stones. I presume that if there was one, there were a thousand. It was very largely distended, and there was no secretion whatever; it was literally gall-stones, and I feel positive that the scalpel by removing it does not remove the disease. The same conditions, I believe that produce them the first time will cause their recurrence.

W. L. HARTMAN, M. D.: I have been much interested in Dr. Biggar's Paper, also in Dr. Walton's discussion.

I would like to ask the gentleman who has lauded the china treatment what thirtieth and two hundredth would do with a gall-stone half the size of a hen's egg. Now this china question and the removal of gall-stones puts me in mind of a patient that I had about ten years ago. He was suffering with gall-stones and would not have an operation. There was a man in Rochester, N. Y., who had the reputation of removing gall-stones, and his time was but three or four hours from the time he gave his remedy. His remedy was large doses of olive oil. This dissatisfied patient of mine went to see the illustrious gentleman, and he gave him his famous treatment. The next day he came to me with a bottle about 8 oz. in size half filled with what was supposed to be gall-stones, and he said to me: "What do you thing of those gall-stones?" Well, of course, they did look like gall-stones somewhat, but I had my misgivings of the exact nature of the little lumps he had in his bottle, so I remarked to him that if he would leave them on my desk over night, I would give him an opinion in the morning. Next morning my happy patient (or the other fellow's happy patient) came to me in great glee for my opinion and I handed him the bottle of olive oil which had dissolved during the night, but as for gall-stones, there were none. It was simply olive oil, and nothing else. Speaking of curing gall-stones—I have a case in mind at the present time where china and all other remedies mentioned had been given. The patient was a woman who had been having attacks repeatedly every month; sometimes every week, for twelve years prior to this, but who for four years had had no attacks at all. They had watched for stones, but never found any, watched very closely until suddenly one day she had a very hard attack and they found a stone. About ten days after this, I opened the gall-bladder and removed fifteen stones. They were the size of chestnuts, and smooth as pebbles on the beach. Therefore, when a patient ceases to have these attacks, it does not necessarily follow that they have no gall-stones. I operated upon a patient a few days ago where china had been given, but the stones were there just the same, and to my mind, I do not think that china would have dissolved them, for they were as smooth as glass, and I took 247 out of the gall-bladder. They were about the size of a marrowfat pea. I never saw so many stones together that were so near of a size. It would have been almost impossible to manufacture them any better if made to order. I believe that in a great many cases irritation from gall-stones in the bladder is the cause of the malignancy that we get arising in that portion of the anatomy. Now, what other troubles do we have here, what danger do we have in gall-stones—empyema of the gall bladder, and I

believe malignancy is very often caused by constant irritation of this foreign substance. I saw a case last summer where the patient had intestinal indigestion. She had suffered from it for a good many years. She had colicky pains, not what we would call a true attack of gall-stone colic, but simply what we would get from the passage of a sandy deposit down through the duct. I was called to see the patient one night and she supposed she was dying with cancer of the liver, as she was told so by a supposedly eminent physician. I diagnosed the case as empyema of the gall-bladder due to gall-stone. The next day I cut down and found just one stone, which was about the size of a robin's egg, with four or five ounces of pus in the gall-bladder. Now we see a lot of these cases that get on without any trouble at all. It has been said that even after operation we have a return of this trouble after a period of three, four or five years, but is it not better to operate once in three or four years than to allow them to have repeated attacks of gall-stone colic once a week or once in two weeks when the operation itself does not entail any more pain, and perhaps not as much, as a single attack of gall-stone colic?

Now, I have tried china. I read Dr. Thayer's article and was very enthusiastic, supposing that I was going to cure every case of gall-stones that came to me. I had three or four cases and promised them a great deal—that I would cure them right away, but as Dr. Walton has said, "The other fellow got the cases after a little," for I did not cure them. Perhaps I did not prescribe properly, but I prescribed all the doses mentioned, and they had gall-stone colic just the same. On the other hand, I think when these patients run five years without an attack of colic, when previously to that they had had colic every month, but that does not signify that there were no stones there, however.

Speaking of jaundice in that paper, jaundice is not a good symptom of gall-stone, in fact, in jaundice there is a greater liability of a catarrhal condition than there is of stone. Unless there is a stone down in the duct which obstructs it, we will not have jaundice, and as a usual thing the stone will pass through before we have jaundice appearing. I believe that it is held at present by our best authorities that jaundice is not a reliable symptom in the diagnosis of gall-stone. In the treatment of these cases, the doctor mentioned a great many mineral waters. I believe that, if we urge our patients who are suffering from this malady to drink large quantities of water, it is as good treatment as we can give them. The olive oil treatment is one that I have tried. I have given olive oil a great many times and found that in some cases it would relieve. Whether or not the time had just arrived when the stone had slipped out of the duct I am unable to say, but I do not believe that it ever occurs. If we are positive that gall-stones exist in the gall bladder, I believe that we are not doing our duty if we do not operate. Now, as I said before, this patient upon whom I operated about ten days ago had been suffering for twelve long years with gall-stones and she would have suffered for the next 112 years (if she had lived) if the stone had not been removed mechanically. I believe that as long as there are gall-stones existing in the gall-bladder there will be an irritation, and as long as we have the irritation we are liable to have colicky conditions.

KIDNEY CASES

BY J. H. MCCLELLAND, M. D.

PITTSBURG

In seeking a title for a paper for this meeting, at the earnest request of our indefatigable secretary, I thought I would look up some data concerning kidney cases that have come under my notice of recent years.

In casting about to determine whether to discuss kidney cases in the abstract, or to specify certain cases in particular, I have concluded to drift along suggestively, reporting a few that may be more or less instructive.

About the year 1881 there came under my care a young woman twenty years of age, who presented the following interesting history and condition. During early pubescence she suffered greatly with pains in her back, with acute exacerbations, such as chills, followed by fever and dysurin. When eighteen years old she had a particularly severe seizure, characterized by severe pain and tenderness in the region of the left kidney. This eventuated in an abscess, which was much poulticed, discharged pus, urine and finally a T-shaped calculus, which had the appearance of two peanuts joined to form that letter. From that time a large fistulous opening remained, from which was discharged large quantities of urine and pus. This had continued about two years, when she came under my care. I first tried various means to close the sinus, and finally concluded to extirpate the kidney. An incision was made through the sinus—that is, by greatly enlarging the sinus, the kidney was enucleated and a ligature thrown around the ureter and vessels. It seemed to me the only way out of the difficulty. Shortly after this I came across an article in one of the medical journals written by Marion Sims, describing in glowing language practically the same operation by Simon, which he had had the good fortune to witness; and referring to a case by Battys of Georgia, the only other case he knew of at that time. This was early in the history of kidney surgery ,and there was but little to be said on the subject.

Not so now, for in the last eight or ten years kidney surgery is the vogue, almost rivaling the much discussed appendix.

Just now nephropexy is in the public (surgical) eye, and, as usual, there is some contention as to priority, particularly with reference to its curative value in chronic interstitial and diffuse nephritis. Whether Lamphear, or McDowell, or Weir or Edebohls, in America, or Hahn or Keuster in Germany, can claim priority as pioneers in this particular

line, does not concern us. All are practically unanimous in the belief that Edebohls has done more than all others to put the operation on a sound and successful basis.

This not only with reference to the fixation of the kidney by extensive denudation of the surface, and secure anchorage by enturing, but with reference to the more complete decortication as a therapeutic measure in chronic Bright's.

The incomparable papers of Edebohls leave little to be said as regards the technic of these operations, and the accumulating experience of our surgeons on every hand bear witness to the value of them. Not that every claim made by the above mentioned operator, brilliant though he is, stands proven, for it is hardly reasonable to suppose that a movable kidney, for example, will induce not only intestinal indigestion, but appendicitis and gall-stones, as has been fully claimed. However, it is not unlikely that many conditions may have a close relationship to this lesion, that have heretofore been laid to other causes.

Then, again, the *rationale* of the cure of chronic Bright's by decapsulation is quite open to discussion.

Edebohls erects the theory that by laying bare the whole surface of the kidney, it is brought in direct contact with the surrounding tissues in such a way that vascular communication supervenes and thus the parenchyma of the kidney is renewed by increased nutrition.

As a matter of fact, it has been proven (Johnston, University of California, and others) that no vascular communication is induced or follows decapsulation of the kidney. But, however the theory may be at fault, it is enough that remarkable results have followed this procedure.

With the hackneyed introduction, that the following few cases are simply offered as a text for discussion, I will report:

CASE II. Miss F., aged 19, a strong, athletic young woman, given to horseback riding and other outdoor sports, is yet the victim of an intractable intestinal indigestion, with not infrequent attacks of colicky pains and diarrhœa. The right kidney is found to be freely movable and at times the seat of much pain. The operation was done June 20th, 1900, and, although I was not then familiar with Edebohls' methods, it was practically the same operation. The incision was parallel to the twelfth rib, the capsule was stripped back and the sutures brought out through the muscles. The recovery was good, and the symptoms of indigestion were at once improved, although recurrences were liable to appear from errors of diet. There were no symptoms of appendix involvement that could be discovered at this time, but about two years later I removed the appendix after two or three moderately

severe attacks of catarrhal inflammation. All conditions are now much improved.

The father of this patient about three years ago developed marked symptoms of diffuse nephritis, showing albumin, hyalin and granular casts, with greatly reduced excretion of all solids. Under the use of remedies, such as opium virus, Berberis and Kali chlor, long continued, this case has to all appearance made a complete recovery.

CASE III. Miss N., aged 28 years, a fairly strong young woman of nervous temperament, and a great sufferer from a variety of local (kidney) and abdominal pains. The right kidney was found to be freely movable and very sensitive to pressure. The operation was done March 26th, 1902. The incision was made parallel to the lumbar muscles, and the capsule stripped back with the kidney *in situ*. Anchorage was secured with kangaroo tendon inserted in the capsule and brought through the muscle. The recovery was prompt, the abdominal symptoms relieved, and the patient has since been traveling abroad.

CASE IV. Miss B., aged 38, was large, well nourished and healthy in appearance. Her mother had died of Bright's, and a sister was also suffering with this malady.

This patient had a freely movable right kidney, and the urine showed albumin in small quantity of one-thirtieth of 1 per cent, with rather sparse hyalin and broad granular casts.

Two years ago I had made a panhysterectomy on account of a large uterine fibroid that was producing disturbing pressure symptoms. Her recovery from this was complete. She now had the objective symptoms above mentioned, and more or less abdominal discomfort, with recurring headaches.

March 17th, 1903, Edebohls' operation was done; the kidney was delivered on to the back and the capsule stripped back about one-half, leaving a broad surface of the kidney uncovered. The kidney was then anchored with fine silk sutures, carried through the muscles. The recovery was prompt and good, and, although it is early to speak of results, the pathologist, at the end of twenty-eight days, reported "casts not nearly so numerous, mostly hyaline, with a few finely granular and very narrow. Albumin only a trace." At this date, three months, the patient is in excellent condition, save for a fistulous opening which has developed and from which two of the silk sutures have been discharged.

CASE V. Mr. B., aged 29. For one or two years has been subject to severe pain in the left kidney and down the ureter, with dysuria. These attacks are very severe at times, and have the appearance of being obstructive. I found the left kidney displaced forward and en-

larged to double its size. I fully expected to find calculi in the pelvis or in the course of the ureter.

The lateral incision was made, and the kidney delivered. It was nearly three times the normal size, was pale, and rather soft. An incision was made through the cortex into the pelvis of the kidney. No stones were found, nor was any obstruction discovered upon passage of the ureteral sound. This was a distinct disappointment. However, recovery was tolerably prompt, and the constant pains were relieved.

DISCUSSION

E. R. Gregg, M. D.: In opening the discussion of this paper (which to me seems a most practical one) I have only to say that it has been my very good fortune to assist Dr. McClelland at some of these operations that he has reported. I have no criticisms to make in connection with these particular cases. While my own experience with Edebohls' operation is somewhat limited, I have used his method of delivering the kidney in several cases. In my first case, which was far advanced Bright's, it was found that the kidney could not be delivered by traction on the fatty capsule together with rolling of the patient over Edebohls' cushion. I was determined to deliver that first kidney, if it were possible, without being too reckless. I therefore introduced my hand into the wound and grasped the kidney and fatty capsule away up under the ribs, separated the fat and kidney from their bed, much as we do in an autopsy, and then by means of strong but careful and intermittent traction the kidney was delivered and the decortication proceeded with. The after-course of the case proved to me that the force which was considered at the time of operation to be excessive was really well tolerated, and I then had an index of the amount of force which could be used in delivering a kidney, after the method of Edebohls.

I have since used the same amount of force where necessary in delivering kidneys, with no ill results. I do not know the experience of the other members here in regard to the force which may safely be used, but it certainly was a revelation to me, as I had about concluded that this first kidney could not be delivered.

H. F. Biggar, M. D.: Mr. President, this paper is very interesting, and the discussion makes it the more valuable. Decapsulation of the kidney affords great relief in Bright's disease. My experience warrants this statement. For hydronephrosis I would not advise the removal of the kidney. From a young lady we removed such a kidney that was merely a thin cyst. The operation proved successful, but in similar cases we now drain the cystic kidney through the lumbar region, and the simple method has proved very satisfactory.

L. K. Maxwell, M. D.: Dr. Biggar has asked for the history of this case since he heard from it. I might say that after the Doctor was down and did this most excellent work the patient went on and made steady improvement. The Doctor is slightly mistaken in saying that there is no albumen in the urine, because the attending physician

told me just a day or two ago before I left Toledo that there was some albumen in the urine, and he is not passing quite the quantity of urine that he did some time ago. The patient having the work done was a man who was much interested in medical and surgical work, and he took great interest in other patients that were there. The attending physician being a particular friend of mine and of friends of mine who were doing the operative work, asked us to allow him to see some operations, and we happened to be doing some kidney work, and he wanted to know why we didn't let him know we did that kind of work so that he could have the work done in Toledo without paying a Biggar price. One of my colleagues who is intimately connected with the attending physician, about two months ago did Morrison's operation on the patient, and since that time there has been a steady decrease in the amount of serous fluid accumulating, but he still had to be tapped about every week or two. They do not allow it to accumulate to a great degree, but he has to be tapped about every week or ten days to get away a medium amount of fluid. He is now much stronger than he was, is eating heartily, eats almost anything he wishes to eat, and is driving out every day; in fact, I met him on the street a day or two before I came away. I have recently had an interesting case of my own. In the latter part of 1902 I was consulted by a young lady twenty-six years old, who for six years had been a great sufferer from what had been diagnosed as cystitis. She had been under treatment by different physicians, and had been curetted and treated locally for uterine trouble, with the supposition that it was due to a reflex irritation of that type. She had at one time early in the case some pus in the urine, and at that time the bladder was irrigated continuously; that is, every day for a period of several weeks. She improved to a slight degree and remained in fair condition up to a short time before I was consulted, but at no time during that time of improvement did she go much over an hour without urinating. From the time I saw her first the patient was compelled to void urine about every fifteen or twenty or thirty minutes, and occasionally would go an hour. I had her in the hospital, examined the bladder with the cystoscope, and found the bladder in a very irritable condition; that is, there was a spasmodic action of it, so that in making the examination the bladder would contract and force a few drops of urine right out onto the reflector. I could find no reason for the great amount of irritation in the bladder. The mucous membrane of the bladder was in practically healthy condition. I found her at that time suffering with severe headaches, which I feared from the nervous symptoms were uremic. The urine was examined carefully, and it was found that she was passing a very small percentage of the normal amount of urea. I commenced to use the thermal bath in order to prevent serious results from the uremic condition, and had repeated examinations of the urine made, and the percentage of the normal amount of urea excreted in twenty-four hours was as low as two and three per cent at one time, so that we had to use the thermal bath continuously for weeks in order to prevent serious results from uremic poison. I found a great many symptoms which made me feel as Dr. McClelland did in his case, that there was stone in

the kidney. We could find no positive evidence of it. It was merely a clinical picture which led us to believe so; and the consultant was of the same opinion as myself. I had the urine examined for bacteria, and found it free from bacteria of the various types, and very few pus cells at one time. The patient finally consented to an operation, and on the fifteenth of this month I made a lumbar incision, brought the kidney up and examined the pelvis, but found no stone. I did find in the superior third of the kidney a hard mass, a mass of the hardness of stone, and in needling the kidney to see whether I could find any stone in the kidney substance the needle would strike this, and it was with great difficulty we could get it to penetrate it at all. I incised the kidney to see the nature of this, and it had more the appearance of cicatricial tissue than anything else, and was so extensive that we thought better not to try to incise it. We closed up the incision, decapsulated the kidney, replaced, and I want to give you the results. I should state further that for months previous to the operation she had passed from twenty to twenty-four and as high as thirty ounces, but for months had not passed over thirty ounces of urine in twenty-four hours, regardless of the amount of fluids she would take, and at the same time was passing urine every fifteen, twenty or thirty minutes, not to exceed an hour, but most of the time every fifteen or twenty minutes. The first twenty-four hours after the operation she passed twenty-two ounces of urine; the second, twenty-seven ounces; the next twenty-four hours she passed twenty-two ounces, and the next twenty-four hours she passed fifty-four ounces. At this time following the operation I was giving her large quantities of water to stimulate the kidneys as much as possible, and on June 15th she passed ninety ounces of urine. At that time she thought she had about all the water she wanted to take, and I told her she could decrease the amount. On the 16th she passed sixty-seven ounces of urine; on the 17th, seventy-one ounces; on the 18th, seventy-two ounces; on the 19th, twenty ounces, and on the 20th, forty-eight ounces, and at that time was taking just about the normal amount. She continually increased the interval between the times of urinating, and when I saw her last Sunday afternoon she had gone that morning six hours without voiding urine, and had voided ten ounces. At one time when she was passing this large quantity of urine she had retained fourteen ounces of urine in the bladder. She had gone six hours without urinating Sunday morning. When she voided the urine she had no pain, and she is having no headaches. The amount of urea excreted now is about sixty per cent of normal, or was at last accounts, about two days before I left home. She is having no headache and no pain, is perfectly comfortable, and feels that she is going to recover. I had the pleasure of seeing an operation for stone on a patient that I had examined per perineum with the X-ray and had diagnosed the presence of stone in that way. The patient was a railway engineer, over fifty years of age. Dr. Ketcham and I found twenty-two stones in the kidney, and the largest one was about the size of a pea. The patient made a good recovery.

THE PRESIDENT: How long has it been since the operation in Dr. Biggar's case?

DR. BIGGAR: Some time in November. The liver was cirrhotic.

D. G. WILCOX, M. D.: Along this line I will relate one interesting case because of its rarity. About two years ago a gentleman was sent to me from Utica, suffering pain in the right iliac region, due as we afterwards found, to the lodgment a calculus in the right ureter.. He had suffered with that nearly a year. During that time he had intermittent pain, extending from the kidney to the bladder, at times very excruciating, such as renal colic alone can cause. He had consulted various physicians, and had skiagraphs taken of that region; the shadow had shown the lodgment of calculus quite near to the bladder. The question was whether or not it was wise to operate. He had been advised variously by surgeons in New York, Utica and Chicago as to an operation, but last fall he made up his mind that he would undergo an operation for the removal of the calculus, and I was called to Utica to operate. I then made a cystoscopic examination of the bladder with the intention of catheterizing the ureters to determine more positively the location of the calculus. I was able to pass the catheter only a short distance through the ureter, especially in the right, but because of the skiagraph I felt very confident that the calculus was there. I first made an intra-peritoneal incision, very much as you would for a left side colotomy. My intention in going into the abdominal cavity was for the purpose of locating the calculus if possible, by feeling it through the peritoneum and iliacus muscle. I thought that if I could feel it very distinctly, I could then make my operation extra-peritoneal and do it rapidly. I was unable, however, to feel any calculus whatsoever through the abdominal cavity, so I stitched up the peritoneum, pulled the skin to one side, using the same incision for an extra-peritoneal opening; this incision extended from the superior spine down to the symphisis. I felt my way down to the body of the iliacus muscle, trying to find the ureter. My difficulty was in locating it. I was not able to do so, however, until I found the right iliac artery, which passes beneath the ureter at a point where it divides into the right and left iliac. I found the ureter was close to the peritoneal lining of the pelvis and was so much the same color that it looked almost exactly like a fold of the peritoneum. I dissected the ureter carefully from the peritoneum and freed it as far down as the bladder; within two inches of the bladder I found the calculus. It had been my intention to open the ureter and extract the calculus, and again sew it up, but finding it so movable there was little difficulty in pushing it down into the bladder. I considered there would be less danger to the patient in allowing the calculus to remain in the bladder than there would be in opening the ureter and run the risk of an urinary fistula. I then dissected the ureter free from its position, so that I could follow it from its origin at the kidney to its termination in the bladder. I closed the incision without drainage. The patient's convalescence was somewhat tardy, but he has made a very satisfactory recovery. The operation was performed in the early part of last October. He has had no pain, whatsoever, from the time of the operation. That old kidney pain has disappeared entirely. There has

been a little contraction of the iliacus muscle which obliges him to walk with a slight limp, but he is overcoming that gradually. An interesting point in the history of the case was the amount of urine. He would go sometimes three or four days or a week with a very lessened quantity of urine, dropping down one-half or one-third, and then again there would be a period in which he would pass great quantities of urine, and it was to be assumed that this calculus would block up the ureter at times, so that little or no urine would pass from the one kidney; and then the calculus must have been dislodged in part or pushed to one side, so that the urine would begin to increase. But I do not think that any time during the two years in which he complained of pain, was the calculus entirely dislodged. The calculus seemed to be in just about the location indicated by the skiagraph. That is, the shadow indicated on the skiagraph corresponded with its actual location as demonstrated by the operation. In looking up the literature of the subject after the operation, I found that very little had been written upon that subject. I think some seventy cases of operation had been reported where calculi had been removed from the ureter. A large majority of these, however, were in women, where the operation was through the vagina. The greatest number of operations performed by any one operator was four; Dr. Kelly of Baltimore having performed four, two of them, however, in women. The two in men were by the extraperitoneal operation.

In size the calculus was about that of an ordinary pea; not larger than that. The ureter did not seem to be greatly distended either above or below this point of lodgment, but of course was distended at the point of lodgment of the calculus.

J. W. HAYWARD, M. D.: This subject of kidney surgery is to me exceedingly interesting, and I hope the discussion is not going to stop at this point. It is interesting from this fact, that the treatment of kidney disease by any other method is certainly very intractable and a very large percentage of failures occur as the result of kidney congestion and kidney inflammation. And if I may be pardoned for mentioning one case, I only do it with the hope of bringing out reports from other people. The question in my mind is this: During what stages of nephritic congestion and inflammation and from what character of nephritic inflammation can we expect relief through surgical means? Several cases have been mentioned, but none of them, it seems to me, quite in the line of the one which I have in mind at the present time. It was in a boy ten years of age, who had contracted kidney trouble some two years previously. His complexion had not much more color than a table cover. His abdomen was distended to the utmost, and notwithstanding he had been tapped over thirty times and in three weeks previous to my seeing him he had been tapped six times and large quantities of water drawn each time, he was at this time passing but twelve ounces of urine. The amount of urea was about in the normal proportion; that is to say, he was eliminating of what he should eliminate perhaps one-quarter. He was growing rapidly bad, and both the kidneys were decapsulated by the method which is recommended by Edebohls. Two weeks from the day of the operation he was voiding thirty-six ounces in

twenty-four hours. It is now about six months since the time of the operation, and twice since the operation he has been tapped because of the accumulation of fluid in the abdomen, but for the past four months there has been no necessity for that. He has regained his color. He is passing the normal amount of urine, with a proper ratio of the urea to the amount of urine passed. He has regained his strength, and in every way seems well. The operation was done, I think, in November. I have not the notes with me, so I cannot state positively. The point that I wanted to raise was this: In what class of cases we may look for relief from surgery. It seems to me that any case which has advanced to the point where you cannot expect to relieve it by medicine is amenable to surgery, and should be treated surgically, though not without regard to the age of the patient.

J. W. Hassler, M. D.: Mr. President, I was rather in hopes that Dr. McClelland would say something about the dangers at the time of operation in kidney cases, in regard to the amount of shock. We have noticed in a number of Edebohls' operations that Dr. Van Lennep has performed, that the moment the kidney is delivered and traction made upon the ureter or renal vessels, there is a sudden shock condition. Another thing we observed was that the Edebohls bag upon which the patient lies increased the shock, and decreased the heart's action; if placed under the kidney only, on the side operated, that the shock was lessened. Dr. Van Lennep's success in regard to Edebohls' operation has been very wonderful indeed. I had hoped he would be here today to discuss this paper and give some of his results. The question was mentioned in regard to ascites. Dr. Van Lennep had a number of such cases, in which the abdomen having been opened, he takes a piece of gauze, rubs the under part of the liver, the diaphragm, the omentum and the peritoneum, causing raw surfaces which adhere to one another. I know of at least five or six cases in which the ascites has disappeared and never reappeared following this method.

G. F. Shears, M. D.: I have had some experience in Edebohls' operation and in the removal of the capsule of the kidney for other causes. In cases of doubtful diagnosis or in which dropsy is present, I have practiced this plan: After operating upon the kidney for the removal of the capsule, I extend the incision a little anteriorly, which allows you to open into the peritoneal cavity posteriorly. This also enables you to get at the peritoneum and suture it or to get hold of the omentum and suture it to the abdominal wall at the same time that you make the operation. It gives you also an opportunity, if you desire, to make direct drainage of the peritoneal cavity. I have made this operation in several cases very successfully. I have also used this incision for the purpose of treatment of those cases in which there were innumerable pains and aches around about the right side, cases in which there was a movable kidney tenderness in the lumbar region and pain in the region of the appendix. By extending the lumbar incision a little anteriorly the appendix can be examined and when diseased removed. I was led to do this because in a certain case in which I had operated for the treatment of removable kidney, in which the kidney was certainly movable, and in which the symptoms seemed to be attributable to

movable kidney, the patient was only partially relieved of the severe pains from which he had suffered. The abdomen was subsequently opened anteriorly and the appendix removed, and immediately all pain was relieved. I then made up my mind, in all cases of movable kidney, unless the indications were exact and definite as to the location of the pain, to make a slight extension of the incision forward and examine the appendix. Both operations may then be at the same time without any scar upon the anterior surface of the abdomen, and without at the same time increasing the dangers of hernia, for every time you open the abdomen and peritoneal cavity there is some little risk of hernia, no matter how carefully you may close the parietal walls. I believe this would save some little trouble. It cannot always be done in severe cases of kidney disease, because you may not desire to take the risk of peritoneal infection, but in cases in which you operate for floating kidney I think it is always desirable to examine the appendix through the posterior incision.

J. M. LEE, M. D.: I am very glad indeed to have heard this discussion. I only want to add one point which I think may be of service. The gentlemen have spoken of delivering the kidney in order to do the decapsulation. This I have found unnecessary, as the capsule may be divided just as readily longitudinally over the convex surface of the kidney without displacing the organ at all, and it seems to me this removes a slight element of danger. I do not re-anchor the kidney in such cases, for I am speaking of cases of Bright's disease uncomplicated by floating kidney.

DR. MCCLELLAND: I have very little to add in closing to what I have already said, but I recall a curious remark made by Edebohls in one of his excellent papers, explaining how he was able to explore the gall bladder perfectly through the lumbar incision and how in several cases he found gall-stones which he could have very readily removed, but refrained from doing so because they did no harm. I speak now of removal through the lumbar incision. I am inclined to think that in spite of the very plausible and apparently excellent reasoning of Dr. Edebohls with regard to the rationale of the process by which chronic kidney disease is cured. You know he works out a theory very nicely as to how by increasing the blood supply through the raw surface of the kidney from the surrounding tissue, the increased nutrition results in restoration. But you may have noticed a series of experiment made by Dr. Johnson of the California University; it was proven that there was absolutely no vascular communication between the raw surface of the kidney and the surrounding tissues. Other observers have also taken this ground from post mortem dissections. Edebohls' theory, therefore, will have to be set aside. Theories, however, do not invalidate results.

It has occurred to me that good can sometimes come from the old-fashioned way of treating disease by remedies. I am reminded of two or three cases where this was apparent, one of which I will mention, that came to my notice first some three years ago. The patient was examined by a local pathologist, whose diagnosis was confirmed by another pathologist in New York City, both of whom made a diag-

nosis of chronic interstitial nephritis. All the conditions were present, including the secretion of a large amount of albumen, the presence of casts and deficient excretion of solids. I had read somewhere of the use of kali chlor 2nd in a series of cases. I put this case, as I had some others, on the continuous use of the kali chlor, beginning at the second, and kept him on it straight away for a year. The New York pathologist said he could not possibly live over two years. That is three years ago, and the microscope does not show a single cast; there is no albumen, not a trace, and the gentleman's health is absolutely perfect. I may add that I have greatly modified a number of other cases by the same remedy.

W. E. Green, M. D.: Though Dr. McClelland's paper treats the subject of Bright's disease from a surgical point of view, I would like before the discussion closes to say a few words on the therapeutical management of the disease. In the summer of 1899, I suddenly discovered that I was afflicted with Bright's disease. In February of that year I had grippe, which ran a protracted course, leaving me with a bronchitis. In March I was taken down with pneumonia and was sick for one month. I had been having severe headaches for two years, and had developed both cardiac hypertrophy and arterio-capillary sclerosis. After returning to my work I felt fairly well, but was easily exhausted. One day, after performing a very prolonged and difficult operation I felt greatly fatigued and suffered severely from heaviness and pain in my back. On returning to my office I noticed that the urine was very scant and highly colored. I collected some of it in a graduate for examination and found that the specific gravity was very high, and that it contained thirty per cent by bulk of albumen, tube-casts and blood corpuscles. Blood-test showed hemoglobin to be forty-seven per cent. I quit work that afternoon and in a few days went to Chicago to consult some experts in kidney diseases. They told me that I was suffering from an acute exacerbation of chronic interstitial nephritis, and gave a guarded, but to me an unfavorable prognosis. Some of my very particular friends predicted my death within six months to a year. Of course I felt despondent. Right on the heels of this, within a month I discovered that I had an enlarged prostate, and a prominent oldschool surgeon diagnosed cancer of that organ. Then things looked very blue to me, indeed. My wife, who is not a physician, but a very intelligent woman, took more than a wife's interest in my case. She procured everything at hand on Bright's disease and studied it until within a short time she knew far more of the subject than I did. She took my case, and her kindness and therapeutical skill brought me out. She prescribed first tincture Aconite and Cantharis, five drops to four ounces of water. I took this about three weeks until the acute symptoms subsided. She then put me on the second decimal dilution of chloride of gold, ten drops three times a day. I took this for eight months, and at the expiration of that time the albumen had disappeared and only an occasional light granular cast could be observed; now there are none. The cardiac hypertrophy was greatly diminished and the pulse very much softened down. The enlarged prostate was relieved and has never bothered me since. Now, this may have been an accidental cure, but I give it to you for what it is

worth. I might state that the experts to whom I applied prescribed a diet. Milk, and the exclusion of meats, seemed to be in most favor with them. I went home and put myself largely upon a milk diet. It produced gases and constipation and I rapidly began to lose flesh and strength. I found this line of dietary would not answer in my case. I never was a meat-eater, so I had not much to lose in that line, but I began to eat nourishing food of all kinds, some beefsteak, mutton-chops, fowl, eggs, cereals, cream, in fact all kinds of nourishing food. I gradually grew better and increased in both weight and strength. After a few months' rest I returned to work and have been working ever since, doing about as much as usual, and I think for a thin man I am a very good specimen of health now.

G. T. Moseley, M. D.: If it is not out of the order of discussion at this time, in regard to Dr. McMlelland's remarks on the observer in California who reported the cases operated upon, our knowledge of the collateral circulation established between the abdominal viscera and the parietal peritoneum is as yet so meagre that it might be interesting to report a case which occurred in my experience about seven or eight months ago. A lady came into my clinic at the hospital with a diagnosis of ovarian cysts. Her abdomen was very largely distended. I found it was a cyst, but very little fluid. We made an exploratory incision and evacuated a very large quantity of specific fluid, and then found extensive malignant disease affecting the liver and omentum. The liver was rubbed with dry gauze and the parietal peritoneum, producing adhesions; the spleen likewise, and the omentum stitched to the parietal peritoneum. The woman was in the hospital about three weeks, and left supposing herself to be cured, as during that time there was absolutely no re-accumulation of fluid in the abdomen, in spite of the very malignant disease. The pain from which she had suffered was relieved to a very marked degree, and, as I say, the patient left the hospital supposing herself to be cured. She returned after three and a half months, without any accumulation of fluid. Of course, she eventually died, and we had an opportunity of making an autopsy, and we found at that time that there was a very marked increase in the circulation between the liver and the parietal peritoneum. The vascularity seemed to be increased to a very marked extent also between the omentum and parietal peritoneum, and the fact that during thirteen months of persistent and increasing malignant disease there had been no re-accumulation of fluid in the abdomen was to me a very instructive and interesting development.

HYPERTROPHY OF THE PROSTATE

GEO. F. SHEARS, M. D.

CHICAGO

That the medical profession has not yet arrived at any certain conclusions as to the best method of treatment for the hypertrophied prostate is fully evinced by the many procedures that have been advocated and still are advocated in medical literature. This lack of a recognized basis for treatment is not due to the rare nature of the trouble or to its insignificant character. Statistics indicate that fully one-third of all men who reach the age of fifty show evidence of this affection, although not all of them suffer from it in its more troublesome forms, so that opportunities for observation and experimentation are not lacking. This disease cannot be considered insignificant or unworthy of attention when one considers the large number afflicted and the distressing and even dangerous nature of the accompanying conditions. Consider for a moment the many cases which have come under your observation in which men have reached an age when, still in bodily vigor, they are prepared to enjoy the fruits of their labors, but instead, on account of this local trouble, are relegated to semi-invalidism; are in constant danger of attacks of cystitis, prostatitis, and nephritis; their vital forces are destroyed by pain, loss of sleep, urinary infection; their æsthetic senses are outraged by their inability to maintain a condition of cleanliness; and their existence made miserable by the servitude of catheter life. Lack of unanimity of treatment is not due, therefore, to the rare nature of the disease, or its insignificant character, but must be due to other causes.

To a certain extent this lack of a scientific basis of treatment may be ascribed, I believe, to the unsettled views concerning the physiological and anatomical peculiarities of the prostate, and to the fallacious ideas inherited from pre-aseptic days concerning the difficulties and dangers of operations on the gland itself. So long as the prostate was supposed to be an urinary organ, or to be necessarily a factor in the act of urination, so long the surgeon had before him the fear of incontinence in all cases, so long as its fibres were supposed to be continuous with the constrictor fibres of the bladder, or its relations to its capsule or the bladder were supposed to be as intimate as in health, so long the difficulties of removal were exaggerated. So long as the prostate was supposed to be an exact analogue of the uterus, so long as the possibility of cure by castration appealed to the physiological mind that had been fed by stories of the cure of uterine fibroids by

the Battey and similar operations, so long radical operations were avoided.

It is interesting to note the rise and fall of such operations as galvano-puncture, parenchymatous injections, ligation of the external iliacs, castration and vasectomy. Of castration, White & Martin's excellent work in 1897, says experience shows that in a large proportion of cases—80 per cent—rapid atrophy of the prostatic enlargement follows the operation, and that there is disappearance or great lessening in degree of long-standing cystitis in 52 per cent, amelioration of the most troublesome symptoms in 89 per cent, more or less return of vesical contractility in 66 per cent and return to local conditions not far removed from normal in 50 per cent. Comparison with other operative procedure seems to justify the statement that castration offers a better prospect of permanent return to normal conditions than does any other method of treatment. These are strong statements, and yet seem to be confirmed by the figures produced, and it is only fair to the authors quoted to say that a large proportion of the profession supported them by reports of cases, and yet to-day the following statement from an article on *Hypertrophied Prostate,* in *"American Medicine,"* represents the position of the profession: "Castration as a cure for hypertrophied prostate has been discarded. There is no direct evidence that castration has ever produced atrophy of the prostate."

The Bottini operation, a modified form of the old method of internal prostatotomy, does not claim to remove the hypertrophy of the prostate or the gland itself, and is not to be classed with the theoretical operations referred to, for it proposes to attack the obstruction itself. It has appealed to me because it is direct, its modus operandi can be understood, and because a large experience with external perineal prostatotomy has proven to me that many of the distressing symptoms accompanying hypertrophied prostate can be relieved or overcome by division of the prostate, whether by the knife or by the cautery. It is not an ideal operation for it does not remove the disease, but it does relieve in a certain percentage of cases. Whether the enthusiastic reports of present day operators will stand five years from now I do not know, but that it is not universally applicable some of its best friends are quite willing to admit. The trend of surgical method is from the indirect to the direct. Hernia has passed through the injection and invagination methods to open incision of the sac and suturing, varicocele from injection and subcutaneous ligation to direct excision, hydrocele through the injection and seton methods to incision and excision, and it seems probable from the present tendency of surgical thought,

and from the awakening interest in prostatic surgery, that this will be the line of surgical progress in the treatment of hypertrophied prostate. At least, it behooves us to reopen the question of removing prostatic hypertrophies instead of limiting ourselves to palliation.

I am not unmindful of the fact that operations having for their object the removal of the hypertrophied prostate have been accompanied by a high rate of mortality, and, considering the fact that such operations have usually not been made until the patient's general health has deteriorated, and his bladder and probably his kidneys were the seat of infective inflammation, considering further that the patient is often at an advanced age, it is not surprising. The most potent factor outside of general conditions in the maintenance of this high mortality has been, I believe, the selection of the suprapubic method as the operation of choice. The prostate is an extra-vesical organ, almost as completely as is the kidney an extra-peritoneal one, and many of the same reasons which may be advanced against abdominal nephrectomy, in a modified way may be utilized as objections to the suprapubic method of prostatectomy. Without going into a consideration of the different methods—McGill's, Belfield's or Alexander's, the three most commonly practiced suprapubic methods, it may be said that all are objectionable because, as stated by Alexander himself, "(1) The mucous membrane of the bladder and prostatic urethra are cut through and more or less torn and bruised. (2) The hemorrhage is severe, troublesome, obstructs the view of the operator, and requires packing of the wound to control. (3) More important than all others, a cavity is left which is freely accessible to the urine. In this the urine collects, and, as is often found in the cases operated upon, there is great danger of septic infection. Nor can this cavity from which the prostate has been removed be efficiently drained. Suprapubic drainage alone is entirely inefficient." These objections may be largely avoided by the perineal method, and the one objection which has largely stood in the way of the development of perineal prostatectomy, namely, the inaccessibility of the prostate, may be overcome by the newer methods of operating. It is no longer deemed necessary to open the bladder so that the fingers in the bladder may push the prostate into view, it is no longer deemed necessary to make a suprapubic extra-vesical opening to achieve the same object, for the organ can be brought down into the perineal wound by other methods.

A word regarding the anatomy and pathology of the enlarged prostate. The prostate surrounds the prostatic urethra, but five-sixths of its bulk is behind the urethra. The gland is surrounded by a distinct capsule which dips into the gland in the median line and becomes

more intimately adherent to the vessels in that region, practically separating the gland into the lateral lobes which are encapsulated, the commissure and the middle lobe, which under normal conditions is a projection of small size from the posterior commissure. Under normal conditions the prostate stands in front of the bladder, but when hypertrophied its relations are changed. It now extends upward on the bladder wall, but its muscular fibres instead of being almost continuous with the muscular fibres of the bladder wall, as they appear in health, are separated from them and stand out as tumor-like masses loosely attached. The organ, instead of being a uniform, spongy structure, is irregularly lobulated, and firm and hard. The thin capsule, once closely adherent to the gland, becomes thicker and easily separable. Freyer claims that under normal conditions the prostate consists of two distinct and separate encapsulated glandular bodies, lying closely approximated one on either side of the urethra and adherent above and below, like the segments of an orange; that as the gland becomes hypertrophied or adenomatous, the adhesions at the commissure give way to some extent and thus facilitate enucleation without injury to the urethra. He believes that although the middle lobe may impede the flow of urine during the early stages of prostatic hypertrophy, yet the later obstruction is always due to the lateral pressure. Wallace in his reports of postmortem examinations of enlarged prostates, says: "The thin fibrous covering has given place to a thick definite capsule, which further differs from the normal structure in that it is readily separable from the contained glandular structure." The hypertrophied prostate thus differs from the normal prostate in its anatomical relations, and these differences all make for an easier removal of the glandular structures. This brief reference is made to the changed relations of the gland in order to show that the objections made to the operation of perineal enucleation from a study of the normal organ do not hold good in the operation made after pathological changes have taken place.

Access to the gland through the perineum may be obtained by various incisions. Fuller advises and uses a semilunar incision extending laterally to the rami from the lower margin of the scrotum; Murphy an inverted Y from the posterior fold of the scrotum to the rami on a level with the anus; and Ferguson, a median incision from the scrotum to the margin of the anus. Most of my own work has been done through a left lateral incision, the perineal prostatectomy being a natural development from the operation for perineal cystotomy for the extraction of stone or the cure of persistent cystitis. In doing this work I was often obliged to cut through an hypertrophied prostate. My first observations were the great benefit that resulted from drainage

of the bladder in the cure of cystitis, and the frequency with which this mere incision often relieved prostatic obstruction; the same results that follow the Bottini operation with the danger of sepsis largely eliminated. For this reason I frequently made this simple operation for the treatment of cystitis and hypertrophied prostate, and have advocated the procedure in different medical societies. In making this operation in the case of a very large prostate and attempting to carefully circumscribe the prostate with my finger in the wound, I found I was separating the growth from the bladder, and as this seemed comparatively easy, I continued the enucleation until one lobe was peeled out. I then turned my knife and made an incision into the right lateral lobe exactly as I have done many times when an incision through the left lobe of the prostate did not give sufficient room to remove a vesical calculus. Through the right lateral cut into the right lobe of the prostate the finger was entered and the right lobe enucleated. This operation, which was done without premeditation, has been followed by several others done designedly for the enucleation of prostatic adenomas—the most common form of prostatic enlargement. The accompanying photograph represents an enucleation of both lobes through the left lateral incision. If more room is needed the inverted Y offers a wide open approach.

Whatever incision is selected, the plan of procedure is much the same. The gland is exposed, pushed downward by the staff in the bladder, the left capsule opened, and the prostate separated from the capsule by the finger and the blunt dissector. The gland is then pulled down with hooks or vulsellum forceps and separated from the bladder down to the isthmus, where it is divided. The right lobe is then treated in the same way. The removal of the middle lobe, if it exists, necessarily removes some of the prostatic urethra. This is of no consequence and affords opportunity for bladder drainage, which is made with a good-sized rubber tube. A part of the external wound may be closed with sutures. The after-treatment consists largely in the maintenance of cleanliness and thorough drainage. The comfort of the patient can be much aided by conducting the urine and other discharges from the wound direct to some receptacle. If the drainage is complete the wound need not be disturbed except to remove any soiled dressings. The drainage tube may be removed at the end of four or five days.

This operation is, I believe, destined to become the favorite operation for the treatment of prostatic hypertrophy, and if advocated and practiced at an early date, will be accompanied by a low mortality and a large measure of success in the restoration of the vesical function.

DISCUSSION

J. M. LEE, M. D.: I have listened to this paper with great interest. Dr. Shears has put into words most beautifully my thoughts upon the subject, and has not only exhausted it, but has given us ideas which it seems to me will be of inestimable value. As the operation for the removal of fibroids finally simmered itself down to myomectomy and hysterectomy in the various forms, I believe that this operation is destined to take the place of all others that have yet been introduced for the cure of hypertrophy of the prostate gland. Although he has enumerated the operations I will review them so that you may have them clearly before you. First, there is prostatectomy; second, vasectomy; third, ligation of the iliac arteries; fourth, castration, and fifth, the Bottini operation.

I believe in the upholding of every institution that makes men better and stronger, and, of course, I do not believe in profanity, and in using the words which I am about to employ in order to suitably characterize this operation I hope you will not interpret me as becoming profane. I simply want to say that of all the operations yet introduced for the cure of hypertrophy of the prostate gland, the Bottini operation is the most damnable. When I take this position, you know that one of the most enthusiastic advocates of the Bottini method is here and will soon be on his feet to controvert what I say. He is one of our own members whom we all esteem very highly and whose articles we are always glad to get, but I simply want to so characterize his favorite operation for this disease that the members may know where I stand at least. Now, why do I so strongly protest against the employment of the Bottini incision for the cure of this disease in any case whatsoever?

In the first place, it so often fails to effect a cure. Secondly, it is a blind method. Thirdly, it is productive of several troublesome and even deadly complications, and should be relegated to the rubbish-heap along with ovariotomy for the cure of fibroids, the ligature in varicocele, the injection and the open-method treatment for hydrocele, galvanism in the treatment of urethral stricture, and the like. You all remember how easy it was to fail to secure all the vessels desired in the subcutaneous ligation of varicose veins, and how frequently we were disappointed with the result of the operation.

Ovariotomy for the relief of uterine fibroids, prior to the introduction of hysterectomy, gave us many disappointments. Injections for the relief of hydrocele and even the open method also were attended by many failures, and you all remember how glad we were to find that we could always succeed by extirpation of the tunica vaginalis and the above antiquated methods are no longer thought of.

Now, this Bottini method must be placed in the same list with these, and abandoned forever. Prof. Carleton would say, "If you are afraid of infiltration make a perineal section, then apply the Bottini instrument by the sense of touch through the open wound and complete the operation in this way." And I would add, Sell the Bottini outfit for old junk, and perform the operation through the perineal incision by complete enucleation of the prostate gland.

Of course, the incision would have to be made larger and fashioned after the method of the author of this paper, which is the best. The vessels can be tied as you go, and if perchance any are too high to reach, adopt the same method employed in vaginal hysterectomy. Artery-forceps can always be used on bleeding points, and if unable to tie them bring the forceps together in a bunch around the drainage tube, then pack gauze around all. The forceps may be left on two or three hours, when they may be removed without danger of hemorrhage, and the post-operative effects of this method of treatment are not half so severe as those from Prof. Carleton's favorite operation. You are not so apt to be disappointed by the extirpation method, the patient is not put in so great danger of serious complications, and the friends are not so often made mourners.

Now, what is needed is that the patients come to the surgeon early, long before they get concentric hypertrophy of the bladder and dilatation of the ureters to the size of the small intestine, with pyolitis or nephritis, which, of course, renders any cure out of the question.

I am sorry to say all this in the presence of my friend, Professor Carleton, who has had so much experience; he told me last winter, apparently in earnest, that he was at the head of the greatest Homeopathic Hospital in the world on Ward's Island, and that it has 12,000 beds; but my duty to the human family demands this expression of my belief.

I see here a young man, a resident of one of Rochester's neighboring cities, who has had considerable experience with Dr. Fuller's method, and I should like to hear from him—Dr. Besemer of Ithaca.

MARTIN BESEMER, M. D.: I would not mind saying just a word or two in defense of supra-pubic operation, which is the one I have always done. I am familiar with that from watching Dr. Fuller do it. After he had done seven or eight I saw him do one of the perineal operations, and it is the only failure he has had, so far as I know. It always seemed to me that it was a matter largely of drainage, no matter how you remove the prostate. But besides that, we always have an infected bladder and sometimes infected kidney back of it, and to put one drainage-tube into the bladder and through the perineum has never seemed to me to be very good drainage. It is like trying to empty a kerosene can with the top screwed on; the kerosene won't run out. The bladder is practically as much paralyzed as the kerosene can is. By unscrewing the top and putting the drainage also in the supra-pubic region, I think you get good drainage. As to hemorrhage, a very small amount of water is always corrective of that. As to packing the wound with gauze, we never do it; it is never necessary.

BUKK G. CARLETON, M. D.: In a certain class of cases of prostate hypertrophy we all agree that the operation proposed by Dr. Shears gives excellent results, but we do not believe that it is in every instance advisable. To attempt to give relief to the urinary obstruction caused by a prostatic overgrowth by an operation performed through the perineal route, is a mistake. To perform always the supra-pubic operation is injudicious; to perform Bottini prostatotomy upon every

case is an evidence of want of surgical breadth. We must individualize; we must consider each and every case, an entity; broadly speaking, we can say when the overgrowth is confined to the glandular and muscular elements, and the overgrowth is large, or when a pedunculated condition is present, projecting well into the bladder and in some cases where there is enlargement of the so-called middle lobe, supra-pubic prostatectomy is indicated, though very frequently this operation must be assisted by perineal drainage if the best results are to be hoped for. When the growth is in the lateral lobes, and of medium or small size, the perineal route is usually preferable. When the overgrowth unites, especially the fibrous elements of the prostate, or where there is a pronounced elevation of the urethral outlet, we believe the Bottini method of prostatotomy will give the best results. I have had considerable experience with this method of surgical relief in the New York City hospitals. The Metropolitan Hospital in New York cannot accommodate four thousand patients or eight thousand, as Dr. Lee said at the New York State Society. At the present time, however, we do have one thousand beds in the Metropolitan Hospital. It is one of the largest hospitals in this country, and the largest hospital in the world under the care of the New School. We have a Genito-Urinary Ward of seventy beds, and there, as well as in my private practice, I have had an opportunity of employing the Bottini method of prostatotomy. This operation does not remove the hypertrophy, but it relieves the urinary obstruction, as proven by my statistics and experience, relief to cure being obtained in about eighty per cent—with a death rate of six or seven per cent. In some of the old men who desired to be operated I have hesitated, it being a question with me whether the operation were advisable, but when they have begged for relief and said, "Doctor, do something," knowing their condition was such that death would result if they did not have surgical relief, and if placed under a general anaesthetic for a time sufficient to perform a prostatectomy that they probably could not stand the shock, I have often performed the Bottini operation with satisfactory results. A few years ago this operation was performed almost entirely under cocaine anaesthesia. Experience, however, leads us to prefer nitrous oxide gas or chloroform.

Before deciding as to the advisability of a prostatectomy or a prostatotomy a careful cystoscopic examination must be made. The Bottini prostatotomy is never indicated when a pedunculated overgrowth extends forward into the bladder. The size and condition of the prostate must be kept constantly in mind as we advance the cautery knife—if injudiciously used immediate urinary infiltration may follow, or later urinary incontinence. When the fibrous elements predominate, if the overgrowth is of average size, a posterior incision three centimetres in length is not unusual. When the enlargement is due to an overgrowth of glandular and muscular elements, the cautery knife, on account of the compressibility of this variety of prostatic enlargement, should not be advanced more than one-half of its estimated diameter. If these points are neglected urinary extravasation often follows, as I have found from experience before I became acquainted with

the use of the Bottini instrument, and how to select the operative means best adapted for relief of the individual case.

A. P. HANCHETT, M. D.: I have just a word to add. I have used the Bottini method somewhat, and I have used instruments, and I do so still. One of the objections to the Bottini operation is the fact that it is done so rapidly that it is sometimes a little hard to make the patient feel that you have done sufficient work for your fee. However, that is rectified by the use of chloroform or nitrous oxide, because the patient never knows how long he is under it. But, seriously, I would simply say that my experience has been so small that I could not give anything that is decisive. I think I have had six cases, with no serious after-effects, and with several cases of entire recovery, or there has been a benefit. I remember one case where a 50 per cent solution of bichloride was applied to the bladder carelessly, but notwithstanding this, the patient made a fair recovery.

W. E. GREEN, M. D.: I want to first compliment Dr. Shears upon his excellent paper, and I wish to say further that I think we all have learned to respect Dr. Shears' opinion. We are all proud of men whom we can absolutely rely on what they say, and know that they are giving us facts. From a long acquaintance with Dr. Shears, and reading his statements, I have learned to repose that confidence in what he says. For me to enter into any discussion of his paper would not, I think, add anything to the strength of his statements. I simply want to relate some clinical experience. I thoroughly accord with Dr. Lee in what he says in regard to the Bottini operation. I think in some cases this operation, when accompanied with perineal section, which insures drainage, may give good results; otherwise it certainly does not meet with my approval. About a year ago I received a letter from an old gentleman in Bucyrus, Ohio, stating that he had a disease of the bladder, and wanting to know if I would treat him if he would come to my town. I wrote to him and told him that from the symptoms he described he possibly had stone in the bladder, and if he would go to Cleveland he would find some very excellent surgeons there and it was useless for him to travel to Arkansas in the summer time, as the trip would be very disagreeable. I gave him the names of some very good surgeons in Cleveland, and supposed of course he had gone there for his operation; but one morning in July he walked into my office. I sent him to the hospital and next day I proceeded to explore the bladder. There was great enlargement of the prostate, but some doubts as to the stone. Within a few days he was put upon the table and the bladder opened by a supra-pubic cystotomy with a view of removing any obstruction that might exist. I extracted seventeen small stones, some of them almost as large as a bird's egg. The prostate was found to be symmetrically enlarged and projecting into the bladder like a cone for fully an inch. There was no obstruction. I could insert my finger into the urethra without hindrance. It was this cone-like projection that gave him trouble. I saw no possible way of removing any portion of it. It could have been enucleated through a perineal section. I closed up the wound and he recovered and went home, but he still suffers with his bladder.

Not a great while ago I was called in to see an old gentleman 68 years of age who had been under the care, at different times, of six physicians—five old-school and one homoeopathist—for enlarged prostate and consequent cystitis. Much of this time he was confined to his room. When I was called he was suffering also from severe occipital headaches, which at that time overshadowed the other complaints. He got relief only from opiates and whiskey. I diagnosed cerebral thrombosis due to syphilitic endarteritis. In two or three days after I was called he went into a semi-comatose condition and remained so for several days. Symptoms of uremia were so marked that I sent a specimen of urine to an expert and had it examined, but he reported it normal, excepting a slight accumulation of pus. Although I could get no syphilitic history I was so strongly persuaded in the correctness of my diagnosis that I put him upon the Iodide of Sodium, 10 grains, largely diluted, four times daily. This treatment was continued uninterruptedly for many weeks. His head symptoms began to improve within 10 days or two weeks, but as he grew better in this respect, his bladder trouble became more noticeable. It soon grew so bad that it was distressing to see him; he was constantly straining to urinate. The rectum would protrude, he would have incontinence of faeces. The bowel became ulcerated, and the old man was in a pitiable condition indeed. The family was clamoring for relief for him and yet they feared an operation which I had advised. Finally he yielded. So I sent him to a hospital and removed the prostate. I introduced a grooved sound so that the beak rested just within the prostatic urethra, which was held in position by an assistant. I then made a median incision, carrying it well down to the sphincter ani muscle. The knife was then pushed along the grooved sound until it entered the prostate, when it was made to incise the capsule sufficiently to admit my finger. The man was very tall, six feet four, and the distance so great that my index finger was not long enough to do the work. I therefore enlarged the wound and introduced two fingers. I could do the work well with the second finger. The right lobe was removed with some difficulty. It was the size of an English walnut. After enucleation it was brought down and separated from the urethra by careful dissection, without much injury to the urethra. The left lobe was much larger, size of a small egg, but was easier of removal. The man made a slow but uneventful recovery, excepting an abscess of the testicle, which appeared late in the period of convalescence. He is now attending to business, a thing he had not done for two years, and will soon take an outing for the summer.

J. H. McCLELLAND, M. D.: Just a single experience, that seems to me rather a happy one. I had a case come under my observation last winter, where a man had been in New York under two very distinguished specialists, for enlarged prostate, and irritable bladder. They treated him for this enlarged prostate, and the conditions that existed with it for several months and finally got so that they simply gave him hypodermics of morphia every day to keep him comfortable. They then proposed the Bottini operation. His wife said No, and brought him home. One of our very excellent physicians was called in, and

he in turn called me in to the case. We found a very large prostate, with distressing dysuria. The urine was alkaline and contained a large quantity of amorphous phosphates and mucous shreds. We concluded to treat him for a time, giving him remedies such as cantharides, corrosive sublimate and so on, which reduced a great deal of the inflammation in and about the bladder. He was so very much relieved that the thought of operation was abandoned. We then put him on conium, following it up with helonias and in the course of thirty days he was entirely relieved of his distress and the prostatic enlargement was practically gone.

It was a surprise to me, certainly. He went back to New York and the specialist there examined him and told him "It was an absolute cure, and I should like to know what did it."

B. G. CARLETON, M. D.: It is a pleasure to confirm the statement of the usefulness of conium made by Dr. McClelland. About a year and a half ago a clergyman came to me, who absolutely refused operative relief. From the symptomatic conditions I gave him conium. He called upon me a few days ago, and the prostate had been reduced more than two-thirds from the original size, and he said that the relief had come gradually, and at that time he felt as well as he did ten or fifteen years previous. I might say that I have seen very excellent results in cases where operation has been refused or where for some reason it was not deemed advisable to operate at the time, not only from conium, but from ammonia chlorate and aurum.

W. E. GREEN, M. D.: I think there are probably more physicians in this room who are interested in therapeutical measures for the relief of enlarged prostates than in surgical measures. Therefore I want to say a word in behalf of chloride-of-gold in the treatment of hypertrophied prostate gland. I have had several patients, myself among the number, who have been relieved by the internal administration of the chloride-of-gold, second decimal dilution, in doses of three to ten drops, three times daily. I do not think it possible to have relieved any of those spoken of here as having been removed by operation; those were of the fibroid variety, at least mine were, as hard as any fibroid you ever saw taken from the uterus. Those that are amenable to medical treatment are the soft variety, where the muscular and vascular structures are at fault, possibly a kind of myo-fibroma.

Another condition that the chloride-of-gold will relieve is cardiac hypertrophy and arterio-capillary sclerosis. I have seen a strong, bounding pulse caused by enlargement, that gave the patient great distress, soften down by a continued and prolonged use of a one per cent solution of the chloride-of-gold. This remedy forms an important constituent of the goat-lymph compound that is so highly recommended in the treatment of arterial hardening incident to senility.

J. W. HAYWOOD, M. D.: I have had good results from the use of saw palmetto. I recall at the present time one old gentleman who had experienced difficulty in this way: The first thing that attracted his attention to any trouble was that he had to urinate very frequently, and very small quantities, with some degree of difficulty. Then he

began to have vertigo; he fell down several times, and when I saw him I suspected that he had symptoms of enlarged prostate, made an examination and found the prostate gland as large as a goose egg, and I prescribed saw palmetto. I examined the prostate six months afterward and found it not over one-half as large. About a year later I made an examination, and I should say it was the ordinary size. That was at least five years ago when I was called to treat him or when he came under my care, and since that time I have had that as a sort of routine, and almost without exception they have been relieved of the urinary difficulty which accompanies enlarged prostate.

G. F. SHEARS, M.D.: I have very little to say in closing the discussion. I have already had my say in the paper, and am satisfied to stop there, except that please remember I do not operate all cases of enlarged prostate that present themselves. I make use of all the means that I can to reduce the enlargement by medicinal measures, and many times great relief is obtained. I try carefully to distinguish between those cases of enlarged prostate that are due to formation of adenomatous growths in the prostate and those cases of enlarged prostate that are due to what I would call congestion and inflammation. I try to distinguish between those symptoms that are due merely to fibrous enlargement and those cases in which the symptoms are largely due to a cystitis. In the latter class by careful drainage of the bladder either by means of a catheter or other measures I succeed in reducing the cystitis and in apparently curing the trouble; that is, the distressing symptoms disappear, but that is not a cure of the enlarged prostate; it does not remove the obstruction. In some of these cases in which it was supposed that hypertrophy of the prostate gland has been removed, I doubt whether the hypertrophy has been removed. Possibly the cystitis that accompanied it has been removed, and, just as in cases of appendicitis, it is the peritonitis that causes the pain, so in cases of enlarged prostate it is the cystitis that causes the pain. But putting aside the large class of cases that may be treated by remedies, there is still a very large class of cases that must be treated by some operative measures, and it is to this class of cases I believe the perineal operation is the most serviceable. So far as drainage is concerned, notwithstanding the statements made, I believe that drainage, perfect and complete, may be made through the perineal opening. When I am trying to drain a house I prefer the cellar to the attic. At least that is my teaching in regard to the different methods of drainage and I have followed it up with, it seems to me, excellent results. Now, if we are obliged in the Bottini operation to make a perineal drainage, why not incise the prostate with the knife and make a perfectly clean operation, instead of making a large eschar which, in due time, when the eschar is thrown off, may leave an opportunity for infection? I am much obliged to the gentlemen who have discussed this paper.

THE SURGICAL TREATMENT OF TIC DOULOUREUX

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PHILADELPHIA

Owing to the large number of papers to be presented to the Association and the consequent limited time at our disposal, I will not burden you with any references to the literature of this subject, probably familiar to every one, nor with a recital of clinical histories. It is my desire to confine myself strictly to the surgical treatment of this distressing malady, and, paradoxical though it may seem, while advocating milder measures in certain instances, to recommend more radical ones under other circumstances.

It has been aptly said that there are certain stages of trigeminal neuralgia, at least as regards treatment.

1. *The period of medical treatment.* While medicine, hygiene and the removal of reflex causes will cure a certain proportion of cases, this should not be persisted in, it is claimed, for more than three or four months.

2. *The period of peripheral operations.* The consensus of opinion appears to be that these should be undertaken before the attack is made on the central portions. This is due to the fact that the peripheral portions are usually diseased first, changes in the more central portions appearing later.

3. *The period of intracranial operations.* This is looked upon, for reasons to which I shall refer later on, as the last resort, except, perhaps, in cases of ascending neuralgia, one branch being involved after the other, from below upward, with or without peripheral operations.

Similar distinctions should be made, I believe, as regards the different branches of the fifth nerve; for instance, the following case will serve as a good example:

Female patient in whom, in 1897, I resected the infra-orbital nerve, following it well back; the operation known as that of Wagner. Fifteen months later, I performed neurectomy of the inferior dental on the same side, trephining the ramus and avulsing the nerve. In 1899, I excised Meckel's ganglion by Carnochan's antral method for a recurrence in the distribution of the second division. A few months ago, on account of a similar recurrence, at the end then of nearly four years, I resected the second division within the cranium and interposed a piece of Lister protective. To this plan I shall refer later on. The

ophthalmic division has been at no time affected, and the inferior maxillary distribution has now been free from pain for over five years.

Judging from my clinical experience it would seem that neuralgia affecting the first branch is rarely met with, or, more correctly, perhaps, rarely comes to the surgeon. They are usually migrainous or reflex in origin, or the "brow ague" of the English writers. As a matter of fact, I can recall but one case in which I have had occasion to attack this branch, and neurectomy of the supra-orbital nerve, together with a similar peripheral operation upon the infra-orbital nerve, resulted in what must be termed a permanent cure, as more than ten years have elapsed.

Equally pertinent to me have been my results after peripheral operations upon the third division. These have been done by deepening the sigmoid notch, opening the inferior dental canal, at times, and then resecting and avulsing the proxima-stump of the inferior dental nerve and, when required, the adjoining lingual gustatory. Neither Dr. Bartlett, with whom the greater part of my neurological work has been done, nor I are aware of a single recurrence. Such an experience, of course, by no means proves that these results are universal, as the most superficial perusal of the literature will show, but still it points to a better prognosis after energetic peripheral attacks on the sensory portion of the inferior maxillary branch.

In marked contrast to the above observations is my experience with similar operations upon the superior maxillary, after which relapses have been nearly universal, and that after every form of extracranial attack, provided the usual period of relief has been passed *i. e.*, from two to three years.

In the January *Annals of Surgery* of the current year, Abbé has a contribution which impressed me very favorably. He divides the temporal fossa vertically, to the middle of the zygoma, retracts the wound laterally, trephines the squamous bone, raises the dura and isolates and resects the second and third branches, interposing rubber-tissue to prevent regeneration. This is on the principle carried out by Chipault, who pushed the divided ends into the foramina rotundum and ovale and plugged the openings with gold. Some years ago, when Beach, of Boston, first suggested the interposition of gold-foil between the brain and dura to prevent anchoring of the former to the latter, I substituted for this, in my clinic and private work, Lister protective for the same purpose. I have now used it in quite a number of cases, enough time having elapsed to prove it to be innocuous, and, by the absence of symptoms of brain-anchoring, to demonstrate its efficacy. In two cases that I recall, on account of infection and slow healing, the protective

worked itself out; in one instance several weeks, and in another several months afterward. Its durability was shown by the fact that it was unaltered. Should this method of Abbé, as practiced by him and by those of us who are experimenting along the same lines, prevent nerve regeneration, some of the greatest bug-bears in the treatment of tic douloureux will be eliminated.

The operation of Carnochan, while easy of execution and not particularly deforming, has been, in my hands, invariably followed by recurrence after the usual lapse of time. While lack of thoroughness may be ascribed as the cause, and that, too, perhaps, with justice, the same is true of the average deep, extracranial method, while those of Braun-Lossen and Lücke on Meckel's ganglion, of Mixter, to reach the second and third divisions in front of and behind the temporal insertion, respectively, of Krönlein and others, have, besides, the disadvantage of being complicated and difficult of performance.

It seems, then, that the extracranial work could be summed up as follows:

In supra-orbital neuralgia, after medical and other means have failed, excision of the nerve should be performed, including the supratrochlear, if deemed best, and this with a good chance of success, especially if the tic is not universal or ascending.

When the inferior dental distribution is affected, neurectomy with avulsion of the proximal stump, together with the lingual branch, if the tongue suffers as well, give reasonable promise of cure, with the above-mentioned reservation. Besides, there is no resulting paralysis of the muscles of mastication.

In middle tic, unless the other divisions are involved, the orbital operation appears to be the best first step, and the nerve can be excised and avulsed practically to the foramen rotundum. This is especially desirable when the upper teeth are implicated. As above stated, it is in this division that relapses most frequently occur, and the next step seems to be a simple, safe and accurate intracranial neurectomy.

As to the intracranial operations, they can be summed up as follows: (1) Neurectomy in front of the ganglion; (2) more or less complete destruction of the latter; (3) division of the sensory root alone, if possible, behind the ganglion.

Extirpation of the Gasserian ganglion in itself is an operation of such severity and danger that I only venture to recommend it after making my patients thoroughly aware of its possibilities. Injury to the fourth and sixth nerves, trophic changes in the eye, such as ulceration and sloughing of the cornea, hemorrhage from laceration of the neighboring cavernous sinus, sepsis and shock, have all combined to

give the operation a published mortality of from 20 to 25 per cent. It is claimed by some that were the unpublished cases known, this would be raised to 50 per cent. Again, paralysis of mastication is an unpleasant sequela, and relapses have been noted in as many as 1 to 20 cases. The latter is due in all probability to imperfect technique resulting in incomplete removal, and Keen frankly points out that such recurrences occurred in his *first* two cases, and not in any subsequent ones.

Of the two routes followed in carrying out this procedure, the temporal is undoubtedly the one generally preferred; for, even in the experienced hands of its originator, Rose's operation has been followed by intracranial sepsis from a wound in the dura and rupture of the Eustachian tube, while the restricted field was probably the cause of a failure to completely remove the ganglion; hemorrhage and imperfect illumination are also serious handicaps.

In the Hartley-Krause operation, I much prefer, as do a good many others, to make the opening by means of the trephine and rongeur forceps, rather than by the osteoplastic *trap-door,* so to speak, and some operators carry this plan to the extent of biting away the floor of the skull as far even as the foramen ovale. Instead of Abbé's vertical incision, I have turned down the soft structures of the temporal fossa on to the zygoma, which can be temporarily resected, if necessary.

Lastly, there remains the operation on the nerve-root back of the ganglion. As first practiced by Horsley, its avulsion arrested respiration, for a time, and was very shortly followed by death, but, as modified by Frazier, its division is much safer and thoroughly practicable. I doubt whether the division can be confined to the sensory root, sparing the motor root, and, in the case operated by Frazier, both were divided with a resulting paralysis of mastication. This operation has the further advantage of not being followed by nutritive changes in the eye, the supposed tropic centres in the inner portion of the ganglion being undisturbed, and while the sinus and neighboring nerve-trunks are also less likely to be injured.

If Abbé's suggestion is borne out by time and experience, we, undoubtedly, have in it a simple, safe and exact method, admirably adapted to take the place at least of the deep peripheral operations undertaken, as the second step in relapsing neuralgia of the second division. The inferior maxillary can be equally well resected at the same time, if necessary. On accounit of the close proximity of the ocular nerves and cavernous sinus, the ophthalmic division is isolated with greater difficulty and considerable danger, except close to the ganglion, where it diverges from them. In a universal tic, I would

be inclined to prefer proximal resection of the sensory root, even if the motor is included, to attempted destruction of the Gasserian ganglion.

DISCUSSION

CLARENCE BARTLETT, M. D.: The treatment of tic douloureux is in the beginning a matter for the medical man only. Later, when he has exhausted his resources, the treatment of the disease becomes surgical. In presenting my views concerning the medical management of this terrible disease, I would have it understood that my remarks are based upon the disease as I have seen it. Most, if not all, of the cases coming under my care have been treated by their family physicians with varying degrees of success and failure—mostly the latter, however, and, therefore, represent the most serious and obstinate examples of the disorder.

As to the possibility of a cure from medical treatment, I hold very pessimistic views. The most that can be expected is palliation. For this purpose, I am positive in my views that morphia, above all things, and the cold tar derivatives should be let most severely alone. The one drug capable of bringing relief is aconitine. It is of the highest importance that a good preparation of the drug be used, for I have seen dismal failure follow its use until a proper preparation of the alkaloid was obtained. The initial dose of aconitia should be 1-200 of a grain, three times daily. No attempt should be made to give smaller doses at shorter intervals. If this dose does not bring a certain amount of relief promptly, then four doses of the 1-200 of a grain should be given the next day; the third day, five doses may be given; on the sixth, the patient may take three doses of 1-100 of a grain each. If, at any time in the course of the treatment, the patient complains of the physiological action of the aconitia, as shown by tingling of the extremities, the dose should be reduced. The best results of the treatment are to be obtained by doses which fall just short of producing physiological action.

The experience, with this treatment, has demonstrated that aconitia is capable of bringing about periods of relief from pain, ofttimes continuing for two or three months after the administration of the drug has ceased. Return of the pain and renewal of the aconitia again brings about relief. Finally, there comes a time when the patient's sufferings are such that operation must be performed. Concerning the results of these, my experience is in accord with that of Dr. Van Lennep. I believe with him that the simpler operations should be selected at first, for it sometimes happens that the ensuing relief is permanent.

When a case has reached that stage demanding the use of morphia, even for a very short time, an operation is imperative. If delayed, there is danger of forming the morphia habit.

I must, in closing, enter my protest against some of the makeshift surgical procedures advocated by some in the treatment of tic douloureux. I refer to tooth extraction, ocular tentomies, intranasal operations, etc. If the case is truly one of tic douloureux, there is not the slightest possibility of these procedures doing any good, and they may do harm. If they should relieve, I would say that a diagnostic error had been committed.

CÆSAREAN SECTION—RECOVERY

GEORGE S. COON, M. D.
LOUISVILLE

Cæsarean section is probably a very ancient operation, although the first recorded case upon a live woman was performed in Germany in 1610. So high has been the mortality, except in recent years, that the operation has usually been avoided at any cost, and only attempted under compulsion and as a last resort. Until quite recently, England gave a mortality of 99 per cent and other civilized countries over 70 per cent.

In considering this operation, however, the statistics prior to a dozen years ago are absolutely worthless, since the technique has been so changed and perfected as to render results entirely different. Perhaps in no other operation has asepsis and improved methods so reduced the mortality.

In one series of 68 consecutive cases a mortality of less than 6 per cent is reported and in another of 27, less than 4 per cent.

Whether these brilliant results can be further improved depends upon the obstetrician early recognizing the demand for Cæsarean section. With prompt operation, before the woman is worn out by her own or the accoucheur's futile attempt at delivery, through the natural channel. Preferably, when possible, this should be determined before the labor begins.

The indications for Cæsarean section may be relative or absolute. If the pelvic contracture be so marked as to make no other method of delivery possible, or if the pelvic canal is obstructed by malignant or benign solid growths or extreme cicatricial contraction, the indication is absolute, Cæsarean section is demanded.

The relative indication has a much wider scope and includes all cases that admit of other methods of delivery, such as symphysiotomy or embryotomy.

There are also border-line cases, the chance being strongly against the delivery of a living child, in which the question will arise as to whether Cæsarean section does not offer the best chance for mother and child. Cæsarean section is in many cases an elective operation, and with it and symphysiotomy to choose between, embryotomy of a living fœtus is no longer a justifiable procedure.

When shall the operation be done? The old idea was to wait until the commencement of labor and until the os was somewhat

dilated. This has been found to be entirely unnecessary, and many prefer, where possible, to elect the time in order that more perfect preparation can be made. Hirst says, "The most favorable time is about two weeks before term." I can hardly agree with that statement, for I see no advantage to the mother in so early an operation and a decided disadvantage to the child that must be nourished on the bottle.

From this latter cause a considerable number of these babies die in early life. The best time for the operation, then, would seem to be as near full term as is compatible with the proper preparation of the patient. If the woman is already in labor, when the necessity for the operation is first recognized, immediate preparation should be made to perform it. Delay is dangerous; every additional hour means much for a favorable prognosis.

Another question that always presents itself in these cases is as to whether we shall do the Porro or the Sanger operation. Gynecologists are very greatly divided in their opinion on this question. All are agreed that the Porro is demanded if labor has been prolonged and futile attempts to extract the child have been made, the endometrium probably being infected, if there is atony of uterus with liability to hemorrhage, obstacles to drainage of lochia from cancer or bony growths, uterine tumors which can only be removed with uterus. Many believe that celio-hysterectomy is the preferable operation in practically all cases, requiring Cæsarean section. It provides against the future possible necessity of another Cæsarean, and is considered by some, even less dangerous than the Sanger operation. More experience will be required to settle the latter point, and probably the skill and individual experience and predilection of the operator must largely be the determining factor. For the unskilled operator the technique of the Sanger operation is much simpler, but it must be remembered that the Porro may be demanded in any case. The technique of the Porro will be sufficiently elucidated by the following case:

Dr. J T. Bryan was called to see M. T. about 10 P. M., May 19, 1899. Patient had been in labor about four hours. Recognizing at once the impossibility of a natural birth he summoned me in consultation. The patient was a well nourished, large, rather fleshy negro woman, 33 years of age.

Family history negative; had never been seriously ill; has had no children; no miscarriage; menstruation regular; painless; about normal in quantity until present pregnancy. Has suffered very little

during pregnancy with the exception of swelling of the feet and legs. Physical examination: lungs and heart normal, uterus high up; sufficiently large for full-term pregnancy, and occupied by a living child; movements active; fœtal heart-sound regular and strong. Attached to the anterior right side of the fundus was a smooth, round, firm tumor about three inches in diameter. Vagina, lubricated with secretion from glands, and a firm, smooth tumor springing from the posterior cervical wall just above cervical lip almost completely filling the pelvis. Marked edema of both feet and legs. A diagnosis of multiple fibroids with pregnancy at full term was easily reached, Cæsarean section absolutely indicated. With the assistance of Dr. Bryan, Dr. Wadlington and nurses two hours later, through a 9-inch incision, the uterus was lifted out of abdomen, temporary sutures drew the upper abdominal wound together to retain and protect the intestines, large flat gauze sponges were packed all about the uterus to prevent the amniotic fluid and blood from soiling the peritoneal cavity. The tumors demanding a hysterectomy, a small longitudinal incision in the uterus was rapidly enlarged by tearing, the membranes were ruptured, a living babe extracted and handed over to the nurse.

The placenta was immediately removed and a large sponge thrust into the uterine cavity. In the meantime an assistant compressed the lower segment of the uterus to control hemorrhage. Hysterectomy was then performed in the usual manner, the broad ligaments having been secured down to and including the uterine artery, the uterus was amputated below the cervical tumor, the peritoneum whipped over all raw surfaces, and the stump dropped into the peritoneal cavity. The only difficulty experienced was venous oozing from the stump; this was finally controlled by free suturing. The abdominal wound was closed without drainage by layer sutures and with exception of slight infection at the lower angle of the wound the patient made an uninterrupted recovery.

The Sanger operation differs in no respect from the above except that the uterine wall must not be torn, but clean cut going right through the placenta if necessary. The uterus is then carefully closed with a deep and superficial row of silk sutures. This suturing is the most important part of the operation.

Drainage of the lochia must be provided by a dilated cervix. If the uterus is not turned out of the abdomen, as is advised by some, a 5-inch incision is sufficient. Personally, I prefer to deliver the uterus before incising. The disadvantage of the longer incision seems to me to be more than counterbalanced by the greater accessibility of the parts and greater security against infection.

In closing let me emphasize the necessity of early operation. Ninety-five per cent of the mothers requiring Cæsarean section and 95 per cent of the children can be saved if taken in time.

I would like to report briefly one case in which I did not do Cæsarean section. The woman was five months pregnant, and we found a large fibroid tumor in the cervix, posterior lip. I immediately told the family that in all probability a Cæsarean section would have to be performed; in fact, did not make it probable, but made it positive, which I now regret, because when the woman came to pregnancy the fibroid tumor had disappeared completely. An examination afterward showed that it had entirely disappeared. The case was very interesting to me, but immediately after this I saw a report by Dr. Bailey, of Chicago, reporting two very similar cases in which a fibroid tumor of the uterus disappeared during pregnancy; this is contrary to the usual teaching, that these fibroids tend to enlarge. Now, as a matter of fact, I had seen this fibroid before the woman became pregnant. I had examined her and had advised against operation, because it was giving her very little trouble, and when I saw her about five months after she became pregnant, it had enlarged, but finally, before she came to the full term, it had disappeared and she had her baby without Cæsarean section. We are taught that most of these cases abort, or if they do not abort the tumor tends to enlarge instead of getting smaller in size.

DISCUSSION

E. H. Van Tiersden, M. D.: I would like to recall a case occurring in the practice of my associate, Dr. Martin, of Lowell. This case Dr. Martin had no opportunity to examine prior to the beginning of labor, the lady living in New Hampshire. Her mother, residing in Lowell, engaged Dr. Martin for the confinement. She came to Lowell about the expected period, and Dr. Martin was not called till labor was in progress. He found a slight contraction of the pelvis, but nothing showing that it was insufficient to interfere with normal labor. General conditions normal. He allowed normal labor to continue for a short time, but progress was very slow. He then telephoned for me. I gave an anesthetic. Dr. Martin applied forceps and used all the force that was considered safe under the circumstances, but was unable to engage the head, even with the extreme force. He then explained the matter to the mother of the patient and the family, and with their consent, the patient not being allowed to come out from the anesthetic, was conveyed in an ambulance to the hospital. Unfortunately, at that time our operating room was undergoing repairs, and we found it necessary to operate in an improvised operating room, one of the bed rooms taken for the occasion with a very insufficient side light, and hasty preparation. The abdomen was opened, the uterus

delivered and surrounded with sterile gauze packs. I maintained a compression about the base of the uterus. A median incision was made, and a living child was delivered and handed over to the attendants. The placenta was delivered and the uterus closed, with, if I remember correctly, chromocized catgut sutures. Hypodermics of ergot were administered. But prior to closing a gauze drain was passed into the vagina. The abdominal wound was closed and the patient awoke in bed, having known nothing from the time she was anesthetized. She made an uneventful recovery, nursed the child, and the child is now living and is three years of age. I wish to recall this case as being successful under very adverse circumstances after violent efforts had been made for a normal delivery. It is certainly a credit to the technique of the operator and the attendants.

R. C. ALLEN, M. D.: I wish to speak of a case which is simply interesting from the fact that the woman recovered. The cause for Cæsarean section was an abnormally large head. The woman had been in labor for several hours, but the attending physician was unable to effect delivery. I was called in consultation and asked the advisability of periotomy. I told him that I thought we could succeed better by removing through the abdomen. So the patient was hastily prepared and ether given, and I performed the operation. I rapidly opened the abdominal cavity and then the uterine wall, and we effected a quick delivery of the fœtus, which had a very large head. It was certainly a very large one, unable to get into the floor of the pelvis. This was her second labor. The points of technique were that the placenta was quickly removed, and the hemorrhage was controlled by the application of clamps at the cervical end of the uterus, and the cavity washed out rapidly with hot saline water, and the other technique of cleansing the bowels with pads and so on, were used. Then the uterus was closed by the usual method of drawing in the perineal surface, and no drain used, but the cavity was thoroughly washed out, as I said, with a saline solution, and the uterus replaced and the abdominal wound closed. The woman made a rapid recovery. That is the only case I ever operated upon for the Cæsarean section operation.

GEO. S. COON, M. D.: The method formerly was to throw a ligature or rubber tube around the uterus, and of course this can be done with safety, but as a rule it has been found to be entirely unnecessary to use clamps or constrictors. Now, I suppose it was really entirely unnecessary for me to have my assistant to compress the vessels, for, as a rule, hemorrhage stops very promptly, and consequently the extra compression of the tissues, or surrounding it with a tube, should be avoided unless it is found that the hemorrhage does continue. Of course, it is rather an exciting time when you get that child out of there and with the little hemorrhage always from the placental attachment loose, we are apt to constrict probably where it is not necessary. The gentleman who just preceded me, and also the previous one, I commend, for not attempting to deliver. That is the great mistake that is made—attempting to deliver—the continuous attempt

to deliver until the woman is worn out and you have sepsis in the uterus, with a consequent high death rate. But where we find that these cases cannot be delivered, the only thing to do is a Cæsarean section, or hysterectomy; there is only one thing to do, not to keep the woman in labor. Of course symphysiotomy takes quite a rank in these cases. The reason for bringing this paper before this society is because surgeons and gynecologists are almost always the ones who do the operation for Cæsarean section. There is another point, and that is, we want to remember that this is not a difficult operation. It is one of the easiest operations, unless we have to remove the uterus. It is simple to open the uterus and take out the child. It is one of the easiest operations we have, and consequently, if you cannot get an expert surgeon, there is many a man, probably, in your immediate neighborhood, who is not right up in all lines of surgery, but who can do this work with your assistance; so that you ought not to let these patients die simply because you cannot have the best surgeon; but of course reach the best one you can. It is a serious operation; I do not want to say that it is not; but at the same time I do want to say that it is one of the easiest operations we have, and if you look it up a little bit the technique is not at all difficult, as a rule, and many of these cases could be saved, even where you cannot reach the best surgeon.

A MEMBER: Will you state the method of suturing?

DR. COON: There are several methods of suturing. The chief thing is to turn in the peritoneal surfaces, if necessary using several running sutures. One of the best methods, perhaps, that has been devised, for turning in the peritoneum, although it is probably not necessary, is to strip up the peritoneum a little from the uterus. The stitch is passed through the peritoneum and superficial muscle. Then it is made to catch the edge of the stripped up peritoneum of the same side, reintroduced from above through the edge of the peritoneum of the opposite side and again through the muscle and peritoneum to correspond with the opposite side. When this stitch is tightened the peritoneum is dragged down slightly between the muscles and perfectly closed. A running suture follows, making it still more secure. The deep sutures go through everything except the mucous membrane and they need not be very numerous, about a half an inch apart. Another method is buried deep and superficial sutures including only the muscle and a running peritoneal suture. The aim should be to get perfect coaptation of the peritoneum, which heals rapidly and is the chief obstacle against leakage and infection. The technique of the muscle sutures is of much less importance.

CURETTAGE AS A THERAPEUTIC AGENT

H. P. COLE, M. D.
HARTFORD, CONN.

As compared with the recitation of brilliant surgical proceedings that are sure to be presented before this body, a paper so very conservative as mine will seem very tame. It has been my duty during the past year to work within the abdomen and pelvis and in other parts of the body, but it has also been my pleasure to be able in many cases to avoid the shock, danger and mutilation that inevitably attend all surgical procedure, however skillfully executed.

Our operative technique is sure to be thoroughly explained; why should not our conservative technique deserve the same attention?

The operation for curettage has become so popular among the profession that it is considered almost a panacea for all uterine diseases attended with any amount of discharge, especially if that discharge be partly or wholly bloody. That it is an absolute necessity in septic conditions following miscarriage or full-term delivery will not be questioned by any one; but the readiness with which it is adopted as a therapeutic measure in all inflammatory conditions, and without regard to their cause, or the condition of the surrounding and contiguous organs, seems to me to justify comment.

After the physician has gone through the regular routine of the icthyol and glycerine tampon, the iodine application, and perhaps the use of a pessary, without material benefit, the patient is advised that the inside of the womb is diseased, and she will have to submit to a curettage. She is often told that this operation will remove all of her troubles and she will be well. She accepts the situation, hoping thus to end all, but when, after the lapse of a few months, she again suffers from her old difficulties, another curettage, or a celiotomy for the removal of an ovary or tube, a suspension, or breaking up of adhesions, or a hysterectomy, are liable to follow.

There are two points that I desire to present for consideration at this time:

First—Do we give sufficient attention to attending, and surrounding conditions, as modifying and contributing to the condition for which our treatment is employed?

Second—Are we not liable to depend too much on the single procedure and neglect all accessory or subsequent treatment, that would

either assist the work of the curettage, or accomplish something that it could not effect?

All uterine disease is a progressive development; it is the result of a local disturbance at some point which gradually produces disease, not only at the point of original disturbance, but in all surrounding tissues, and in those that have any physiological relation with it. Thus an endometritis would be attended with a contracted cervix, a retention of a part of the menstrual flow, absorption of partly decomposed blood, congestion of the whole uterine substance, effusion of serum or plastic lymph into the fibro-muscular substance of the uterine wall, overweight and descent of the whole organ, extension of the inflammation from the endometrium out through the tubes to one or both ovaries, and from there to the surrounding peritoneum; adhesions between two contiguous, inflamed peritoneal surfaces covering prolapsed or misplaced organs, and a disturbance of the whole pelvic circulation.

If this be true any one form of treatment would be of little benefit. The discharge of a quantity of fluid caused by the use of a glycerine tampon would do no good, for the amount would be almost instantly replaced from the overdistended blood vessels of the uterine wall. The spongy, hypertrophied endometrium, removed by the curette, would soon be reproduced, and the injury to the uterine walls might increase their inflammation. The suspension of a uterus may relieve its pressure upon other organs, but it does not always relieve the inflammation either of the uterus, or of its adjacent organs; even bilateral oöphorectomy is often followed by painful menstruation that may continue for years; and hysterectomy by continous pain, from the pinching of ligatures and from adhesions, and the suppuration of plastic deposits. If then we depend on any one line of treatment, or neglect the antecedent conditions which led up to that which we are to treat, and those which have developed along with it, we will surely fail in accomplishing what we desire.

Curettage is to the treatment of uterine diseases what mastication is to nutrition, a very important and valuable part, though a very limited one, and should never be depended on as the whole of the treatment. If we fail to swallow the food, if it is not digested, assimilated, and converted into blood, it is of no benefit to us. If after the most perfect curettage we fail to remove the interstitial congestion, effusion, or plastic infiltration, correct malpositions, detach adhesions, and remedy any other accessory disturbance, our curettage will count for naught, and our patient will present the same conditions for treatment—probably by some other physician—as soon as they can redevelop. The operation is so common that *many* of our chronic cases

have submitted to it, many of them more than once, and while great benefit has resulted from its judicious employment, it often fails to produce the desired result, for the reason above stated. I desire to present two interesting cases by way of illustration. These cases cover two widely different conditions, though they are very characteristic of their kind:

Case 1. Mrs. C., a farmer's wife, mother of three children. Last child aged about twelve years. Her husband called and reported that his wife had been ill all winter and was now unable to be out of bed. The history of the case is that for several years past she has not been at all well, menstrual flow gradually increasing in frequency and amount. Two years ago she consulted a prominent surgeon who gave her a few treatments and told her she would have to be curetted. In November last, she entered his private hospital for the operation. Remaining in the hospital one week. On returning home she was worse than before, suffering a good deal of pain as a result of the operation, and the flow was not at all diminished. She remained in bed most of the time up to the time of my first call, which was March 18th. In all this time she was not able to be on her feet at all; she had continual backache and pressure in the pelvis; menstruation recurred every two or three weeks, the slightest exertion would increase the flow, and she was very weak. Examination revealed a hypertrophied, hyperaemic, boggy uterus, crowded down against the perineum and extremely sensitive to the slightest touch. The tubes and ovaries could easily be felt, everything seemed swollen, sensitive and prolapsed. Placing the patient in the Sym's position, turned well over toward the face and the hips slightly elevated, I pushed the uterus up out of the pelvis as far as it would go and took pains to have the tubes and ovaries crowded as far up as possible. Gelsemium 1x was prepared to be taken every two hours. The patient remained in this position with no pillow under the shoulders for an hour, when she was allowed to change, but she remained in bed until my next call two days later when the treatment of the first day was repeated but the restrictions in regard to remaining in bed were somewhat relaxed. At my third visit three days after the second the patient was dressed and walking about the house very comfortably. Nearly all the pain was gone; there was little sensitiveness to pressure in the uterus and tubes; her appetite had returned. I made a fourth visit to the house when the same treatment was repeated and she then said that she felt as though she could come to my office for the next treatment, which she did a few days later, riding a mile and a half on the trolley car. At this treatment I passed a No. 15 sound through the cervix, applied to the sound

the positive pole of a faradic battery, giving her a mild current from a long fine wire. After the canal and the cervix were thoroughly relaxed I passed into the cavity of the uterus a small curette which I constructed from a fine flexible applicator, with this I removed all clots of blood and shreds of mucous membrane which could become decomposed and absorbed into the circulation. After this the sound was again passed, this time using a current from the coarse wire for stimulation and after pushing the uterus up as far as possible with the patient in the Sym's position she returned home. This treatment was repeated in three or four days when she reported continued progress, increase of strength and appetite, and doing some of her work. At the proper time her next menstrual flow appeared, lasted about a week and stopped as it should. Immediately after this flow had stopped I repeated the treatment described, carefully removing all clots of blood or shreds of membrane. On May 1st, the family moved to another suburb of the city and the housemaid departed, since which time the patient has done all her own housework for a family of five and considers herself about well. She will need a little more attention from time to time.

Case 2. Miss B, aged 22. At about 15 years of age metrorrhagia began to develop. She soon discovered that she was unable to exercise in any way without bringing on increased hemorrhage. Four years ago after unsuccessful efforts at treatment a physician came to her home and did a curettage under anesthesia. She was some better for a few weeks but soon returned to her flowing. About a year after the first curettement the operation was repeated in about the same manner, her physician being unable during the interval to give her any satisfactory treatment on account of continuous hemorrhage. After the second operation she was a little better again for a few weeks but again the hemorrhage returned. She spent several months in a private sanitarium but with little benefit. What the treatment was there I do not know. About a year ago she went to a private hospital in Boston, where, as she reports, at least one ovary was removed, and another curettage was done. After this she was better again for two or three months, but again the flow returned and she was at a loss what to do. Through the suggestion of a friend of hers and a patient of mine, she came to me, after she had by rest and care reduced her flow as much as possible. The first thing I discovered upon examination was a crescent shaped uterine mouth so characteristic of a laceration following miscarriage or full term delivery, that I thought I had misunderstood my patient and asked her if I had understood her correctly that she was not married. The center of the anterior lip was

decidedly swollen, the mucous membrane puffy, spongy, and would easily bleed on the slightest touch. There was a continual discharge of dark, bloody serum from the canal. In attempting to pass the sound I found the cervix very much contracted so that it would not admit a No. 10 sound. I connected to the sound a cord from the positive pole of a faradic battery, using a fine wire current. In a few minutes the sound passed through the cervix. When it passed the point turned decidedly to the patient's left and it occupied that end of the crescent shaped os. Its removal was followed by a discharge of a quantity of dark, partly clotted blood, and mucus. I again used the faradic current and the sound passed much more easily. This sound was followed by a larger one which left the canal large enough to pass my improvised curette with which I removed all clots of blood and shreds of mucous membrane which occupied the cavity of the uterus. The depth of the uterus was about normal, its cavity slightly dilated, and the position of the fundus a little in front of normal and well to the patient's left side. The right side of the uterus seemed entirely free of adhesions or tenderness, but the back, front and left side were occupied by bands of adhesions extending to surrounding organs. Some of these adhesions gave way on pressure. With the patient in the Sym's position a copper electrode about one-half inch in diameter was passed all around the body of the uterus, between it and surrounding organs, as high as possible, especially where there were adhesions. After three treatments substantially like the first the flow ceased, although the patient at each time rode ten miles and back on the trolley car, and during the day was about the house like any other member of the family. In about three weeks after her first call her menstrual period made its appearance, lasted about a week, when it gradually subsided and I began treatments again. An older sister reported to me recently that the patient had not been as well in seven years. She is gaining flesh and strength and says she is very happy. I asked the patient to write to her surgeon and get a definite report of his operation. In response to her letter she received the following:

"Dear Miss B.—Thank you for your favor. The left ovary was removed, the uterus suspended. Cervix dilated and the uterus curetted. The pathologist's report was cystic disease of ovary, and hyperplastic endometritis. The left ovary was buried in adhesions. I am sorry that you are still in the hands of the Philistines."

After this report I made a more careful examination and was unable to determine any adhesions at all at the line of abdominal incision, but could well account for the adhesions found at the site of the left ovary at the time of the operation, and so far as I could judge, they

were the only means whereby the uterus was now suspended. The sound did not pass toward the abdominal wall but in a nearly normal direction, except its deflection toward the point from which the left ovary was removed. The hyperplastic condition of the uterus was easily discovered at the time of my examination. The color of the uterine mucous membrane has become nearly normal and a No. 10 sound passes readily. No hemorrhage follows even firm pressure by the sound, or my improvised curette. Most of the adhesions are gone and my patient appears to be nearly well.

These two cases represent, as I stated, two widely different conditions, the one a large hyperæmic varicosed uterus crowded down into the pelvis, and all circulation obstructed. The other a normal sized but inflamed uterus with a contracted irritable cervix, and a hyperplastic endometrium, with abundant adhesions the result of peritonitis. Both were curetted with but temporary benefit.

I do not recite these cases as an evidence of any special expertness in gynecological work, but to show how easily they might have been cured without operation.

In the second case, the young lady, who was engaged to be married, had lost one ovary and the uterus was suspended. She did not know whether both ovaries were removed or not and was in a quandary whether to break off her engagement or not because she did not know that she would ever be well enough to be married. These cases are but two of a large number that have submitted to curettage but did not recover because other conditions which demanded attention were overlooked or neglected. One interesting point in my second case was my inability upon careful examination to detect any evidence of the suspension mentioned in the surgeon's letter, except the adhesions at the point where the ovary was removed. As I found the very same condition in another case where the left ovary was removed I am very strongly inclined to believe that the suspension was not a success, or the uterus had become detached since it was done.

These two cases are very good examples of two conditions that we meet with almost every day, and which are not incurable by our ordinary office methods, but are very often taken to the operating table without beneficial results because surrounding and secondary conditions were disregarded.

One of the cases represents a type of prolapsed engorged hyperæmic uterus in a healthy suburban farmer's wife, undoubtedly due to maternity and a liberal amount of hard work, although there was no laceration either of perineum or cervix. Everything was prolapsed and devitalized, there was a distended venous circulation, and as the blood

could not get back to the heart it was crowded through the uterine mucous membrane, and when that was gone it came more freely than before. Inverting the pelvis by placing the patient in the Sym's position and separating contiguous organs, thus relieving an obstructed circulation allowed the blood to get out of the pelvis, and all tissues to contract to their normal condition.

The second case represents the type of contracted inflamed and hyperplastic unimpregnated uterus, where a free outflow of menstrual blood is restricted and normal circulation prevented by an irritable, contracted cervix. The first was dilated according to a principle suggested long ago by Dr. Pratt that if a sound a little larger than a relaxed cervix is passed, the pressure on that cervix by the sound will stimulate it and cause contraction, and I find that many cases as they progress toward recovery will not admit as large a sound as they did at the first treatment, and I often find that during a treatment, a uterus that at first admitted quite a large sound will contract so that at the end of the treatment it will as tightly hug a much smaller one. During the time the whole uterine substance must have changed its condition.

The second case was dilated, very gently, to relieve pressure upon the uterine circulation and the restricted caliber of its canal. One received a coarse wire faradic current to stimulate contraction of the uterine wall, the other a current from a fine wire to relieve irritation. In both I used the small curette to remove all clots of blood or shreds of mucous membrane that might decompose and produce sepsis from absorption. I do not like to irrigate a uterus or a pus cavity, for a solution of an offending material is much more readily absorbed than the original material, and some of the solution is bound to be retained within the cavity. On this account sepsis often follows irrigation. True the uterus can be dried with gauze packing, but we often fail to reach all parts of the cavity, even if the patient is not too sensitive to be packed at all.

In all uterine work I prefer to use the graduated sounds until the uterus is well dilated, for the reason that the blades of a smaller dilator are sure to bend, the pressure is applied to a limited part of the cervical circle and laceration is very liable. I am very sure that the crescentic appearance of the os in the second case reported resulted from a laceration from the blade of a dilator.

If we arrest the heart's action we die, if the circulation to a part is arrested it dies. Life, then, is circulation; perfect life, or health, is perfect circulation, and imperfect circulation is disease. We may remove from the cavity of a uterus an offending material, or from its inner surface granulations, and other growths of pathological nature, the one a cause, and the other an effect of disease; but we do not thereby

remove the disease which has been established by the cause and which produces the effect. Curettage then is but a part of the work to be done, and if we stop at that we will usually fail to accomplish the desired result.

Dr. Cole followed his paper by saying: I have here an instrument which I have used with quite a little satisfaction. I do not know whether it has ever occurred to anybody else. It is made of copper and has a curette on one end and a gauze packer on the other; a convenient little thing which has been very useful to me. Being of copper, either end will bend and adapt itself to any shape or position of the uterus.

DISCUSSION

G. S. Coon, M. D.: I take one exception to the paper, and that is in regard to the use of irrigation in pus cavities, and also of the uterus at times. It seems to me that in some of these pus cavities it is the only way we can do it, by the use of irrigation; you cannot get at them to sweep out or wipe out, and some of them are sometimes away down back where you cannot reach with any gauze or any probe, and I would have to take exception to that part of the paper which includes all cavities. In regard to the uterus, of course I am a believer in the douche, even in the uterus. In case you have a septic condition of the uterus it is one of the means of cleansing, and if you can clean out the pus with gauze you certainly can clean out the water with gauze. I can see no objection to the use of the douche in the uterus, and more particularly the use of irrigation in cases of pus cavities. It has stood us in good stead in the past, and unless we can get something better I should probably use the same in the future.

H. P. Cole, M. D.: In regard to Dr. Coon's criticism I have had a few bitter experiences with irrigation. One case in particular, a septic case, irrigation was followed up for a long time; the patient continued in a septic condition and died in a way that seemed to me she should not have gone. It was not my own case; it was simply one that I observed in the hands of another. But irrigation was faithfully, carefully and technically carried out, and the patient went on to destruction. Another case of irrigation in the hands of this same physician, a young man, had an abscess in the foot resulting from an injury. I was called in consultation to see the case. When I saw him there were seven openings into that foot at different points, each one discharging through rubber drainage tube. That foot had been irrigated continuously. My judgment was that the irrigation had been carried on long enough. The patient was taken to the operating table and each of the sinuses curetted. The foot was surrounded with absorbent cotton and a pressure bandage applied, the idea being to crowd all the fluid out of that foot into the absorbent cotton. The patient had no

other treatment of any description. The physician in charge resigned his charge of it because he thought amputation was necessary. There was no further irrigation, nothing but the bandage and the absorbent cotton were used. I had a nurse carry out the treatment. This was in a town ten miles from me, and I saw the case at intervals. It rapidly progressed from that time and healed completely, and he had good motion and a good foot. Those are only two cases illustrative of several, and I feel as I stated in my paper, that I dislike to irrigate a pus cavity. My general rule is not to do it, if the pus is thick, ordinary healthy pus. I agree that if you have a bad condition, that might modify it somewhat, but the trend of my opinion is that pus is thicker than a solution of pus, and it will not be absorbed where the solution is liable to.

GYNÆCOLOGIC CASES ASSOCIATED WITH APPENDICULAR DISEASE

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The percentage of gynæcologic cases complicated with disease of the appendix is not large, but the diagnosis and treatment of such is especially important, owing to the fact that we secure only partial relief when one of the morbid conditions is not recognized at the time of operation. If the diagnosis is not clear, operation is too long deferred and this is followed by an increase in the fatalities.

Medical literature formerly treated appendicitis as especially occurring in the male, in the proportion of seven to one; later writers cited their observations as five to one and at the present time many statistics have been recorded where appendicitis in the female was noted in one-third the number of cases. This has been due to the fact that more accurate observations among gynic surgeons have brought to light an increase in the cases occurring among females, and of the number a large percentage have been associated with tubo-ovarian disease. Errors in diagnosis are made in a small percentage of cases, owing to the difficulty of obtaining an accurate knowledge of the intra-abdominal conditions. This is especially the case when the appendix occupies an abnormal location, as is exemplified in the case where the organ extends across the abdominal cavity and adheres to the structures in the left pelvis giving rise to many confusing symptoms, among which we have the maximum pain and tenderness in the left lower quadrant.

Of abdominal sections performed in my hospital service, I find about 11 per cent. showing diseased appendices. This complication is noted to have occurred particularly in the sub-acute or chronic stages of tubo-ovarian disease. When an attack of appendicitis and adnexal inflammation begin simultaneously the symptoms are apt to be confusing. We know that a frank seizure of appendicitis often occurs with the menstrual flow, which may come on as an irregular period, associated with more or less pain in the lower right quadrant and extending down into the pelvis. In such an uncomplicated case a pelvic examination would be negative. With both of the above-mentioned abnormal conditions present in an individual there is discoverable in the pelvis an inflammatory mass, with varying symptoms, according to which was the primary cause of infection. If the appendix was first affected

the pain and local tenderness begin above the pelvis, about the McBurney area, with secondary involvement of the adnexa; the symptoms referable to the pelvic cavity follow in their train. On the other hand, if the tubo-ovarian disease was the primary one, the pelvic symptoms occur at the same time or precede the attack. In many cases you will find by careful inquiry into the history of the patient, symptoms which point to tubal or ovarian disease. The symptoms are those of tubo-ovarian disease, combined with those arising from appendicular inflammation. The complexity varies, according to the position occupied by the appendix, the area of inflammation and the tissues involved.

Among the cases recorded I find the following pathologic conditions: In two cases there was an open fistula between the adherent appendix and right pyosalpinx.

Three cases where the appendix was bound by adhesions to a right tubo-ovarian mass.

One case in which the appendix, omentum, tube, ovary and uterus were intimately blended, the whole forming a large, inflammatory tumor.

Two cases showing the appendix attached to a right ectopic (tubal) pregnancy, one of which had ruptured; the other was still intact at time of operation.

Two cases wherein the appendix was reduced to a fibrous cord and attached to a tubo-ovarian mass, which had also advanced to the same state of fibrous change.

One case where the appendix pointed downward, backward and was adherent to the lower border of the right kidney, which was slightly dislocated downward. In this case the principal symptom was pain referred to the lower right quadrant and transmitted posteriorly to the kidney area. This symptom was considered due to a right salpingitis (which was present) until cœliotomy revealed the appendicular attachment.

One case having the appendix stretched diagonally across the abdomen and attached to the small intestines in its course, also adherent by its tip to a left-sided pyosalpinx. This appendix was 15 centimeters long and by its torsion produced left-sided pain, with numerous reflex-symptoms of vague and indirect character, which were all relieved following the operation.

One case, a young girl brought to the hospital with a history of traumatism over the lower right quadrant, produced by falling face downward in the street on some loose cobblestones. There were three bruises over the right iliac fossa to corroborate her statement. After observing the case for several days, and the soreness continuing,

the abdomen was opened, showing a chronic salpingitis of the right side with an inflamed appendix; there being no connection between the two. (Rare.)

Two cases of obliterative appendicitis, wherein the appendix (in one instance) was reduced to a fibrous cord having no mesentery and adherent to neighboring structures. The other was a patient aged 58, who gave a history of frequent attacks of abdominal pain referable to the right side, occurring every few months over a period

APPENDIX ADHERENT TO PYOSALPINX IN LEFT PELVIS, ALSO ADHESIONS ALONG THE ENTIRE LENGTH OF THE ORGAN BINDING IT TO THE UTERUS, RECTUM AND TUBO-OVARIAN MASS ON THE RIGHT SIDE.

of twelve years; abdominal section revealed an amputated appendix attached to the cæcum by the meso-appendix only. There was a small elevation on the cæcum showing where the base of the appendix had been.

One case of retro-cæcal adherent appendix. This patient had been a sufferer for ten years with a prolapsed, enlarged and painful right ovary, but had refused operative relief. She eventually had an attack of appendicitis, which cleared up sufficiently to enable her to be about

at the expiration of seven days. Some soreness remained over the right lateral region, on a line with the umbilicus. Operation disclosed an appendix which was difficult to locate until by following the longitudinal fibres along the raphe of the colon, the organ was found bound down with numerous adhesions behind the cæcum.

The above gives sixteen cases, which elucidate some of the appendicular complications I have met with in gynæcologic surgery. Other observers have reported cases having fistulæ connecting the appendix with the liver, gall-bladder, pleural sac, intestines, bladder, etc. Among Kelly's statistics are found 115 abdominal sections for pelvic disease; the appendix was adherent to the right tube or ovary in ten instances. Adhesions of the appendix were found in 37 cases; in 3 cases it was congested, and in 1 obliterated at its base; thus leaving 64 normal.

A case illustrating the point made in the opening sentence is worthy of note. A young woman 20 years of age, consulted her family physician for symptoms which were diagnosed as due to appendicitis. A consultant was called upon and promptly opened the abdomen, removing a slightly inflamed appendix. Vaginal examination was not made. The post-operative period lasted over three months, during which time there were only four days that the morning temperature reached normal; that of the evening varied from 99.5° F. to 100.5° F. Upon vaginal examination there was found a thickened tube on the right side, quite painful when touched by the examining finger, the patient immediately exclaiming, "There is that old appendicitis pain again!" Many of the symptoms in this case, which had been considered as coming from the inflamed appendix could be reproduced by making pressure upon the chronically-inflamed tube. I could cite numerous instances of similar cases in women where the entire treatment was directed to the McBurney area, and where the symptoms persisted, and later, a pelvic examination revealed adnexal disease, which required further surgical interference to restore the patient to health.

In women, a retraction of the thigh early in an attack of appendicitis is not often due to the appendicular inflammation, but to a co-existent inflammation of the right adnexal organs, in contrast with the same symptom in the male, wherein the flexed thigh is caused by the inflamed appendix resting upon the posterior layer of the parietal peritoneum, where there is an involvement of the peritoneal tissues with or without abscess-formation.

Infection travels from the appendix to the pelvic structures by the lymphatic channels, which enter the meso-appendix and pass onward, emptying into the mesenteric and meso-colic glands; also by way of the appendiculo-ovarian ligament, to the right adnexa and uterus, and

thence to the pelvic fascia. The blood-vessels are also avenues along which infection is apt to be carried to other organs.

In cases where the appendix is situated low down, and in contact with an inflamed Fallopian tube, it soon becomes associated with the former disease, and *vice versa.*

SHOWING DOUBLE PYOSALPINX, AND APPENDIX ADHERENT TO LOWER BORDER OF THE RIGHT KIDNEY.

If there is present in a patient, positive evidence of tubo-ovarian disease, and a mixed train of symptoms, such as epigastric or umbilical pain, with nausea or vomiting, constipation or diarrhœa, the pelvic pain extending well up on the right side of the abdomen with rigidity of the over-lying muscles, a diagnosis of appendicular inflammation should be

made and the case considered from this standpoint. There is one exception which would cause us to modify this statement, namely, in the case of gonorrhœal infection, wherein both uterine appendages were affected and a slow, progressive, pelvic peritonitis is under way. Here we often find the patient nauseated and having paroxysmal attacks of pain extending across the lower abdomen. If the physician is called in late in such a case he may find considerable difficulty in making a diagnosis. The microscopic examination of the vaginal discharges may help; but the fact must not be lost sight of that the gonococci, even when they are the causative agent, cannot always be identified.

When the appendix is the seat of primary inflammation there should be no difficulty in diagnosing the conditions, and it is gratifying to see our patients consenting to operation without protest. Compare the present with a few years ago, when nearly every patient shrank from surgical interference until *in extremis*.

Occasionally, there is found above the pelvis a small, ovarian cyst, with twisted pedicle, and, if this is located on the right side it would complicate the diagnosis; but, as it produces symptoms indicative of operative interference, the proper treatment would be made.

In treating gynæcologic cases where the right tube or ovary is inflamed we should always examine carefully to determine whether the appendix is involved or not; if such is found to be the case, early operation should be advised.

The cases that are seen late, having a low position of the appendix with rapid onset, are soon followed by acute inflammatory changes. The adhesions formed are weak and insufficient to wall-off the peritoneal cavity from infection; hence the pus tends to leak into the pelvis, forming secondary abscesses, which produce severe pelvic pain with more or less bladder and rectal irritability. Such cases develop a high degree of toxæmia. Pelvic examination shows the contained organs matted together and immovable.

Leucocytosis can be demonstrated if the blood-analysis is made at the proper time.

Cases developing abscess (of appendicular origin) are extremely virulent and very difficult to handle successfully.

The best reason for selecting the abdominal route in operating for pelvic disease is that the appendix can be directly dealt with through a cœliotomy incision; whereas, in the vaginal incision, the appendix cannot be inspected or removed. The preferable incision, then, is through the right rectus muscle. After the muscle-fibers are separated the peritoneum is opened, and if the abscess is deep-seated, the free peritoneal cavity is walled off with gauze; then gently lifting up upon the

cæcum until the inflammatory mass involving the appendix is reached, the pus can be liberated by careful, blunt dissection into the abscess-cavity, using small strips of dry gauze to sponge out the pus; after which a few pieces of gauze, previously soaked in hydrogen dioxide are wiped over the cavity. If the appendix and tube are free and can be easily removed they should be so treated.

In cases where the abscess is situated low down in the pelvis drainage can be made through the posterior *cul-de-sac* with a strip of iodoform-gauze, which should be removed in forty-eight hours. Where a pelvic abscess has its origin in the appendix, the danger of having a coil of intestines below the abscess-cavity must be remembered.

When the appendix is found showing chronic inflammation associated with pelvic disease, the majority of cases can be treated by total removal of the diseased organs and the wound closed. In case the appendix and tube are not subject to easy removal they should be allowed to remain, even at the risk of future infection. An attempt at extensive dissection in these cases carries with it a high mortality. Subsequent operation for their removal can be undertaken with much less risk to the patient.

In a small percentage of cases, where the vital forces are very low from prolonged sepsis, the patient cannot stand an abdominal section without great risk to life; the posterior *cul-de-sac* operation can here be used to drain the abscess and, after the patient is built up, the complete operation can be carried out.

Summary.—1. The history of a case will often give valuable data leading us to determine the primary source of the inflammation.

2. The appendix should always be inspected when operating for pelvic disease.

3. Abdominal section is the preferable operation in dealing with these cases, as the appendix can always be examined and removed, if necessary.

4. In cases of tubo-ovarian disease confined to the right side, and associated with indefinite intra-abdominal symptoms, early operation should be the rule.

5. Late cases of pelvic abscess having a high degree of toxæmia are more safely treated by evacuation through a posterior *cul-de-sac* incision.

DISCUSSION

WM. B. VAN LENNEP, M. D.: I have been much interested in reading Dr. Chase's excellent paper and I am happy to say that I can corroborate over and over again, from my own experience, the clinical observations cited by him.

I heartily concur in the attention he calls to the importance of differentiating right tubo-ovarian from appendiceal disease, and I make it a rule in all cases of appendicitis in the female, to carefully investigate the pelvic organ before the abdomen is opened, and again before it is closed. Many grave errors of omission, at least, if not of commission as well, can be avoided in this way. While an upgrowing tumefaction with a fulness felt through the vagina, easily distinguishes pelvic disease from appendiceal disease with its down-growing tumefaction without such fulness, an appendiceal abscess, when it comes to the surgeon, not infrequently fills the right side of the pelvis more or less completely. I have on more than one occasion opened such an abscess through the vaginal vault or even low down near the vulva, and have also seen them rupture spontaneously into the rectum. As a rule, such drainage, even though dependent, is best supplemented by an opening above, which is to be preferred if but one is to be made. Aside from through and through drainage, one is able to work more intelligently and safely and often to excise the offending organ.

In the presence of left-sided tenderness from a stretched adherent appendix, I have been able to recognize the characteristic, tender spot at the base of the organ as well. This same tenderness is met with in multiplying abscesses originating in a down-hanging appendix, which show the well-known tendency to pass across the pelvis and up the inner side of the descending colon. Again, I have met with such tenderness where the abscess has begun about an appendix hidden behind a fibroid or pregnant uterus. Following the direction of least resistance the pus forms a swelling above the left groin, while the tenderness at the base cannot be recognized on account of the intervening uterus. Here I have evacuated the abscess on the left side and made a second opening on the right for through and through drainage as well as to attack the appendix. In one case I remember turning out a large fibroid to reach and clean out the abscess and gangrenous appendix behind it.

So-called gynæcologic cases and particularly those presenting disease of the right adnexa are in my experience very apt to show associated disease of the appendix. Some years ago I made it a rule to examine and usually to remove the appendix in every pelvic operation carried out through an abdominal wound, provided the patient's condition permitted the extra manipulation. While the gross appearances presented by the organ led me at times to think that I had needlessly removed a healthy appendix, microscopic examination has usually shown chronic inflammatory changes which, to say the least, would have necessitated an operation later on. Such a routine practice, when the abdomen is once open, I believe to be practically without danger. Excision is undoubtedly indicated in the presence of visible mural thickening and injection, of peri-appendiceal lesions, such as fibrinous peritonitis as shown by adhesions, etc., of kinks or stenoses with imprisoned fluids or fæces; it becomes imperative when the appendix is attached to or imbedded in a tubo-ovarian mass or an ectopic-gestation, whether ruptured or not, or when it is pinched by a fibroid or pregnant uterus. Kelly addressed some eighty prominent surgeons on this subject and in the opinion of the majority a normal appendix should be left alone. In

his conclusions, however, he states that even slight adhesions call for excision, as does also the presence of fæcal concretions, even if the appendix is healthy, and that a long, free appendix should always be removed. This, added to my observations, would seem to justify pretty general "incidental appendectomy."

The coincidence of right iliac and pelvic disease may be explained in several ways.

Reference has been made to the interchange of infection between the pelvis and appendix through the lymphatics and the retro-peritoneal connective tissue, and in this I thoroughly concur. The same is true of the observation extensively made, that attacks of appendicitis favor the menstrual time, when pelvic vascular disturbances may readily interfere with the extra blood supply provided the appendix in the female in a certain proportion of cases, rendering it therefore the more or less complete analogue of the organ in the male.

The vascular changes associated with pelvic inflammation and probably to a less degree with pregnancy and uterine tumors also tend to produce similar results. In these cases then the female appendix becomes equally prone to inflammation as that of the male and they bring the proportion of attacks in the two sexes from twenty-five to one, fifty to one, or even one hundred to one, down to seven to one, five to one or even three to one.

Whether such a position can be ascribed to the agency of the so-called ligament of Clado or not, I have observed that the majority of appendices in women point toward or hang down in the pelvis, and this is especially true in the presence of pelvic disease. The exceptions are only sufficient to prove the rule. This naturally favors attachment of the appendix to inflammatory masses in the pelvis, but it is one of comparative safety as the infection spreads into the more slowly absorbing, often immunized, pelvic peritoneum.

I am inclined to disagree with the statement concerning the cause of retraction of the thigh in the two sexes, for while this may be produced by pelvic or right iliac inflammation, it is due, as in psoas abscess, to the irritation of that muscle and possibly of the iliacus.

Traumatism, either from the outside or from muscular exertion, and active exercise in the sedentary appear to bear such a causative relation to the induction of attacks, that one would expect to find the appendiceal disease distinct from any coexisting tubo-ovarian lesions, unless the attack occurred in a chronically inflamed appendix.

In the cases of twisted ovarian cysts I have met with, I have more than ever been impressed with the value of the tongue as a means of differential diagnosis. In appendicitis it is characteristically coated, flabby and indented; in peritoneal infections of pelvic origin it is apt to be more nearly normal. The tumor and vaginal examination will usually settle the question, and besides, as has been stated, in either case operation is demanded. More difficult of recognition to me was a case of ovarian cyst with a long pedicle, lying in the right iliac fossa and not readily movable, under which was an acutely inflamed appendix.

ESTLANDER'S OPERATION FOR THE CURE OF CHRONIC EMPYEMA

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Introduction.—I am sure no apology is necessary for bringing before you this subject. All physicians of mature experience have met cases of empyema and have seen life menaced by large accumulations of fluid within the pleural cavity. They have seen the disastrous effect of prolonged lung-compression, even to permanent obliteration of its function. They have seen the blighting effect of such crippling of the vital capacity in the collapse of the affected side of the thorax, as far as such collapse can go in the impingement of the ribs upon each other, curvature of the spine, displacement of the heart, imperfect aeration of the blood, dyspnœa on exertion, and the establishment of permanent invalidism, with possibly the engrafting of tuberculosis upon the impaired lung-tissues, and death.

It is my purpose in this paper to emphasize,

First. The pressing necessity of prompt evacuation of fluid from the pleural cavity, whether such be serous or purulent, and to establish such efficient drainage that there will be no further danger of reaccumulation.

Second. To show that failure to establish such efficient drainage results in permanent collapse of the lung and partial or total obliteration of its function.

Third. That the patient suffering from chronic empyema, which follows upon such neglected cases, while incurable as far as restoration of the crippled lung is concerned, may be made vastly more comfortable by excision of all or part of the ribs of the affected side.

Empyema is usually a sequel to pneumonia, and is so insidious in its progress that it frequently escapes recognition until the pleural cavity is enormously distended and the lung correspondingly compressed.

The dullness and subdued respiratory murmur of pneumonia often merge into the same phenomena of empyema, hence it is not extraordinary that the onset of the latter sometimes escapes observation.

There can, however, scarcely be doubt of the presence of an empyema when dullness persists, after the cough and expectoration of pneumonia have subsided, and the respiratory rise and fall of the affected side is partly or wholly absent.

When doubt exists, the aspirating needle is always a final and positive test. The latter, however, should not be depended upon for removal of the accumulated fluid of a pyothorax, for often there are fibrinous masses which cannot by any possibility be thus withdrawn, but may choke the needle and thus delude the novice into the belief that there is but little fluid in the pleural cavity.

This is the critical period in the career of the patient, for steps now taken are likely to determine whether a complete and effective drainage is established, giving scope for the lung to again expand and resume its function.

Failure to inaugurate efficient drainage is sure to result disastrously in some cases—not all—for absorption and spontaneous recovery sometimes occur without surgical aid. The danger, nevertheless, is grave, and one which should always be given weighty consideration.

Allow me to reiterate, for I feel that it is worthy of repetition, that the aspirating needle should be depended on only as an aid to diagnosis. Not a few of the sadly-crippled cases which have fallen into my hands for the Estlander operation have been those which have been repeatedly but incompletely aspirated.

I beg, also, to warn against a simple incision through the soft parts, for the fluid-cavity is so completely caged by the closely approximated ribs, that an intercostal opening, except in the hands of an expert who can be in daily attendance upon the case, is not likely to be capacious enough, nor to be maintained long enough, to effectually drain the cavity. All the space which can be secured by an intercostal opening may be quite inadequate for the evacuation of the large, fibrinous clots which are such a frequent accompaniment of empyema. Such drainage may be wholly choked by these clots acting as a valve and damming back the fluid in the affected pleural cavity, which should find absolutely unobstructed spontaneous outflow. This can be secured in but one way, viz., resection of one inch of the eighth rib in the line of posterior border of the axilla.

This I have done so many times, with nothing but uniformly good results, and often at some distant point where I could not see the patient again to follow up the after-treatment, that I do not hesitate to recommend it in all cases of empyema. In no instance has the resection of the rib been followed by any disability whatever; neither has there ever been anything other than prompt convalescence, with perfect resumption of lung-function. With proper instruments at hand, it is a simple and brief operation, without danger, and a positive guard against lifelong crippling of the respiratory function. With this introduction, I will ask you to a consideration of

The Physical Conditions Attendant upon Chronic Empyema.—These are, perhaps, best illustrated by a photographic reproduction of a case which came under my observation several years ago. The dark area on the anterior aspect of the thorax represents the site of a small fistulous opening, leading directly into the pleural cavity between the fifth and sixth ribs, slightly to the right of the line of the costal cartilages. This opening was made early in the progress of the case, but not early enough to furnish free and adequate drainage. Were the colors correctly represented in this picture, you would see a yellowish line of pus trickling from the aperture, which represents the overflow from a pus-cavity within the right thorax. The dotted line represents, approximately, the size of the abscess-cavity, which has materially diminished in the months which have intervened since the acute stage of the disease. This reduction has come about from two sources: First, there has been incomplete expansion of the lung and collapse of the chest-wall, in so far as the bony framework of the same will permit. Of lung-expansion, there has evidently been in this case enough, so that the respiratory capacity has not been seriously impaired, for auscultation shows normal respiratory murmur throughout the upper portion of the affected side, and the general condition of the patient, although somewhat pallid and pinched, does not exhibit material deficiency in aeration of the blood. The interspaces of the ribs are lost, *i. e.*, the ribs so approach each other that their edges impinge or slightly overlap. In brief, then, the physical conditions are these: The lung, because of previous prolonged compression, has failed to resume its full function and can no longer fill the portion of the thorax designed to contain it; the chest-wall, which normally possesses a limited respiratory rise and fall, has collapsed as far as its bony framework, the ribs, will permit. There remains then a cavity which has a cirrhosed lung and greatly thickened pleura as an inner wall, and the rigid chest-wall as the outer.

Inspection of the chest and comparison of the two sides shows asymmetry, partial or complete loss of respiratory movements on the affected side, lowering of the shoulder, and compensatory curvature of the spine.

General Effect upon the Subject of Chronic Empyema.—All available evidence points to the probability that pneumococcic invasion of the pleura is the cause of empyema.

Once pneumonia of the respiratory tract is established, the possibility of a pleural, peritoneal or meningeal invasion should be anticipated. "Fore-warned is fore-armed" is a motto on everyone's tongue. The existence of a pulmonary pneumonia is a forewarning that a pneu-

mococcic pleuritis, peritonitis or meningitis may supervene. It is a warning that a persistence or recurrence of thoracic dullness is not a "recurrence of pulmonary pneumonia," nor a "chronic pneumonia," but a pleuritic effusion due to pneumococcic invasion of the pleural cavity. It is a warning that abdominal pain and tenderness is not an appendicitis, but pneumococcic peritonitis.

Forewarned, that a pulmonary pneumonia may be the precursor of a pleuritic effusion, it is the veriest kindergarten of medicine and surgery to diagnose and treat intelligently, promptly and efficiently this menacing condition.

Assuming that the patient has survived the effusion, and has adapted himself to the lung-compression, and that somehow, either by aspiration or drainage-incision, the pleural cavity has been emptied, and that a communication with the external surface has been established, there is sure to follow within a short time a pyogenic infection of the cavity, *i. e.,* there comes, finally, to be a double infection, pneumococcic and pyogenic. The physical conditions being such that the cavity cannot obliterate by any process of repair, there supervenes a chronic toxæmia. Great thickening of the pleura occurs even to half or three-quarters of an inch. The patient has a constant exacerbation of temperature and pulse, appetite and nutrition are impaired, the diminished lung-capacity limits physical exercise through inadequate blood-aeration; in short, there is a distinct lessening of vital capacity and resistance. If, under these conditions, the tubercle bacillus becomes implanted in the already weakened tissues, the patient rapidly succumbs to tuberculosis.

In the past, this has been such a common sequel of chronic empyema that a fatal tuberculosis is usually predicted, and the tendency has been to complacently await its destructive course. It is my firm belief that the majority of such fatalities can be averted by early and radical surgery.

The Technique of Operation for Chronic Empyema.—The problem confronting the surgeon in this operation is the removal of enough of the bony framework of the thorax to permit the soft parts to collapse and obliterate the cavity.

This may be no more than three or four inches of two or three contiguous ribs, or it may be nearly the whole length of every rib from the second to the eighth, from the angle to the costal cartilages.

Percussion may determine, approximately, the area of chest-wall to be subjected to rib-excision. If it be but a small area, involving but a few inches of three or four contiguous ribs, a longitudinal incision between the two ribs first selected for resection will furnish adequate

access to them both, and so on until only soft parts remain as a covering for the cavity. The costal pleura is sure to be much thickened as a result of the long-continued inflammatory process. Healing will be much expedited, if the flaps are lifted sufficiently to dissect this out. It is desirable to leave the wound very wide open to provide abundant drainage.

If the whole, or nearly the whole, of the side of the thorax affected be a suppurating cavity, extending from the first rib to the diaphragm, a different procedure is necessary, because, to effect the desired result, the whole side of the thorax must be uncovered. A somewhat triangular flap of skin is lifted with its base, on a level with the axilla and its apex, at about the eighth rib. This is dissected cleanly from the ribs, lifting the muscles with it. The ribs thus exposed are, alternately, excised from the costal cartilages to the angles, or as near their spinal attachments as may be necessary or possible. There is, usually, but little trouble from bleeding, and no attention need be given the intercostal nerves.

The length of segment of the respective ribs, and the number, must be governed by the size of the cavity to be uncovered. It is emphatically necessary to remove all the costal pleura, and thoroughly expose the uttermost recesses of the cavity and clean away all pyogenic tissue by curetting. The heart-pulsation will be easily felt and seen in the depths of the cavity. The skin-flap is then replaced and sutured, leaving two or three openings for drainage and irrigation. Irrigate daily with hydrogen-dioxide solution, one part to three of water. Repair will always be slow, but after two or three months the cavity should be obliterated and the patient free from the annoyance and menace of a chronic abscess.

The patient will never be robust, the thorax will always be crippled, the spine curved and the shoulder drooping. The remaining lung will, under favorable conditions, undergo some compensatory increase in function and serve fairly well the requisites of a quiet life.

Case I. Katie D., aged 13 years, suffered acute empyema of the right pleura six years ago. At that time the ordinary operation was made; that is, an incision was effected through the soft parts between the ribs and pus evacuated. In a short time the external wound so nearly closed that there was but a small sinus for the exit of the discharge. The lung never expanded, the thoracic wall of that side collapsed all it was posssible for it to do, *i. e.*, until the ribs impinged upon one another.

The patient presented a most striking appearance. The face was pinched, pallid and denoted long suffering. The left chest was abnormally full and developed, and with each respiration rose and fell,

seemingly with nearly twice the range of action ordinarily seen. The right chest was as totally collapsed as the rigid walls would permit; the antero-posterior diameter was but two and one-fourth inches, and the circumferential measure was three and one-fourth inches less than the opposite side. The spine had a lateral curvature, with the convexity toward the sound side. From the sinus, which still persisted, a small stream of thin, offensive pus trickled as soon as the dressing was removed. I at once gave an opinion that a large suppurating cavity existed beneath the chest-wall, and there was no hope of relief and cure except through resection of a large area of the ribs covering it, thus affording the most thorough drainage of the cavity, as well as opportunity for the further collapse of the chest-wall, and final obliteration of the suppurating cavity.

The parents readily consented; ether was administered, and the original sinus was opened, with the aid of knife and gouge, sufficiently to carry the finger in and sweep it about the cavity. It was overflowing with pus, which gushed out in quantities.

The cavity was found as large as a coffee-cup. Incisions were then carried from the opening already made, vertically and horizontally, for three inches, and a triangular flap of skin raised, exposing the ribs. With the Rongeur forceps these were quickly gnawed away, until the cover, as it were, of the whole cavity had been taken off. The ragged portions of the thickened pleura were cut away with the scissors, the cavity thoroughly washed, and the skin-flap allowed to fall into the wound, without any effort to suture it.

The subsequent history of the case can be summed up in a few words. There was the most prompt recuperation. The appetite quickly returned, temperature fell to normal, the face became plump, and eyes bright. In short, the miserable, spiritless child in a few weeks became active and well. The abscess-cavity was, of course, slow in filling with granulation, but there was no longer any confined pus,—the cavity could be easily kept clean; the skin-flap gradually attached itself over the bottom of the cavity, and, at the present time—seven months from the date of operation—there is remaining only a depressed cicatrix, with superficial sinus about one inch long, which is gradually closing.

Case II. J. H. J., aged 16, suffered acute empyema of the left side eleven months ago. An opening was made at that time in the fifth intercostal space, about three inches to the left of the sternum. This closed, except a small fistulous opening, from which pus trickled at all times.

The general condition of the patient was miserable in the extreme. He was emaciated, pallid, temperature 100 degrees F., no appetite,

fingers clubbed, and, as a whole, about the most unpromising subject for an operation that could be imagined. He was etherized with the view of resecting a sufficient number of the ribs to uncover the whole abscess, but he tolerated the anæsthetic so poorly that nothing was done beyond effecting a free opening by resecting a single rib. This afforded perfect drainage and opportunity for thoroughly washing the cavity daily.

The cavity was found very large, extending nearly from the clavicle to the diaphragm. The heart was much displaced to the right, and its pulsation could be plainly seen beneath the right intercostal spaces. He recuperated rapidly, and in five weeks the second operation was made, which consisted in the removal of nearly the whole bony framework of the anterior portion of the chest. The skin-flap was carefully preserved and turned into the cavity, and held in contact with the bottom and sides by gauze-packing. Healing has gone on rapidly, and prospects are excellent for final closure of the wound.

CASE III. Miss K. L. M., aged 45, suffered pleuro-pneumonia in March, 1901. In April, the left thorax was aspirated. In June, a portion of a rib was resected and permanent drainage established. This, however, did not result in obliteration of the cavity. The lung failed to resume its function, and a large suppurating cavity persisted, extending from about the second rib to the eighth, and from the line of the costal cartilages to the posterior axillary line.

In May, 1902, thirteen months after the first attempt to remove the fluid by aspiration, I first saw the case, and operated in the Lowell General Hospital for radical obliteration of the cavity. On percussion, there was sonorous resonance all over the area involved, and auscultation exhibited but slight respiratory murmur in the very uppermost part of the side affected. By the Shedd modification of the Estlander method, the third, fourth, fifth, sixth and seventh ribs were resected from the costal cartilages to, or nearly to, the angles. This effectually uncovered the cavity and afforded opportunity to dissect away all the thickened pleura and curette away all pyogenic membrance and *debris*. The skin-flap was replaced and sutured with interrupted silkworm-gut, leaving multiple openings for drainage. At the present time, one year from the time of the above-described operation, complete healing has occurred, and the patient is able, under strict limitations, to go about and enjoy life.

CASE IV. Mr. L., aged 36, presented at the Massachusetts Homœopathic Hospital. He had an opening, posteriorly, just above the line of the diaphragm on the left side, communicating with the interior of the thorax, from which a copious, offensive, purulent matter was exuding.

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OBSTETRICAL SOCIETY OF THE AMERICAN INSTITUTE OF HOMŒOPATHY

PROCEEDINGS

The first Annual Meeting of the Obstetrical Society was called to order by the president, Wm. A. Humphrey, M. D. After the reading of the minutes of the preliminary organization, and the appointment of Dr. D. A. Foote, Omaha, Neb., Dr. B. H. Ogden, St. Paul, Minn., and Dr. Florence Ward, San Francisco, Cal., to prepare a constitution and by-laws, Dr. Geo. R. Southwick, Vice-President, took the chair while the President read his address.

In the business meeting of the second day the committee on constitution and by-laws submitted its report, which was adopted by the Society. The essential points of this report were:

1. Annual dues shall be one dollar.

2. The time and place of meeting shall be the same as that selected by the American Institute of Homœopathy.

3. The Secretary shall prepare the Transactions of this Society for publication and submit them to the Secretary of the American Institute of Homœopathy for publication with the transactions of that society.

Election of officers for the ensuing year resulted in the selection of:

L. L. Danforth, M. D., New York, as *President.*

D. A. Foote, M. D., Omaha, Neb., as *Vice-President.*

B. H. Ogden, St. Paul, Minn., as *Secretary.*

Florence N. Ward, San Francisco, Cal., as *Treasurer.*

B. H. Ogden, *Secretary.*

OBSTETRICAL SOCIETY

OF THE

AMERICAN INSTITUTE OF HOMŒOPATHY

PRESIDENT'S ADDRESS

WM. A. HUMPHREY, M. D.
TOLEDO, OHIO

In welcoming the members of the Obstetrical Society of the American Institute of Homœopathy we deem it only proper to remind you that the formation of this organization is an important step in the advanced standing of this branch of the profession, and is but the just recognition of a specialty which deserves broader scope at the hands of both the profession and the laity than has usually been accorded it.

It is eminently fitting that we should meet in the historic City of Boston at this time, for in so doing we revive and honor the memories of such men as Flagg, Wesselhoeft, Clark and Payne, whose valiant work for Homœopathy shines so brightly among the early pioneers of the American Institute of Homœopathy. Our coming is largely accidental, and yet how gladly we come when we are reminded that their toils and influences are largely responsible for the splendid society from which this is the final outgrowth.

The obstetric art is as old as civilization and yet its recognition as a distinct branch of medicine is comparatively recent. Not until 1810 was it organized as a separate chair in the colleges. From that time onward it has advanced hand in hand with surgery and other branches of medical science.

The really new features are almost entirely the outgrowth of the adoption of aseptic methods of modern medicine and those of the newer classification of surgical procedures employed in dystocia.

The practice of obstetrics has always been along conservative lines. It has never presented the attractive features such as are found among the newer operations of the gynæcologist or the surgeon. Our field of usefulness, however, does broaden, and it seems

to me that at no time has the obstetrician had so great a field before him as at the present.

The continued contact of every practician with the practice of midwifery has done much to rob it of its claims to a specialty. It is a specialty, however, of the most distinct kind and the one which should occupy the foremost rank of all specialties. When the obstetrician accepts the care and well-being of the mother and the offspring as well, he assumes a liability no less than that of the gynæcologist doing abdominal section. Yes, even more than this, for he assumes a responsibility which involves the possibility of any of the operations incident to the art, and in addition, the care of the offspring also. Abnormal presentation, deformed pelvis, in fact dystocia in all its forms, are common to the obstetrician. His preparation is no less than that of the surgeon and his requirements are in every way equal.

The unnumbered multitude of mothers who have returned to health under the care of the modern obstetrician, who would have died from sepsis, or finally survived its ravages under the old regime, only to carry its indelible imprint upon the system in the shape of salpingitis or cellulitis, which quietly pursues a latent course of inflammation to certain invalidism, these mothers who have thus escaped, are the living monuments to the skill of modern medical science. When we contrast this with the conditions which prevailed a generation ago, we congratulate ourselves that we have seen great changes for the betterment of mankind.

Has the great change taken place? By no means is it universal. The real change is that from one of excusable ignorance of the forefathers to one of criminal carelessness of many of our colleagues. Much carelessness still remains and until the laws of the land hold every physician liable for the exercise of skill commensurate with best scientific attainment, we cannot emphasize too fully or too frequently the necessity of keeping before the profession and the laity the benefits to be derived from high attainments in medicine.

The time has gone when dignified silence alone is emblematic of wisdom. The public press, in their ambitious search for wisdom, have invaded the field of medicine and are putting before a reading public, many medical facts, so that the physician who would hold his place in the community as a competent person to deal skillfully with human ills, must not only display skill, but he must give intelligent answers to competent inquiries.

The real progress of asepsis is still very much hindered by the indifference of a heedless profession, which is already overcrowded by men who have never added anything except cheapness to it. This ob-

stacle, however, is stumbled over by the laity to their detriment and the detriment of the profession, by robbing them of adequate remuneration for the skillful performance of duties for which they are well qualified.

It is our greatest duty to stand for the defense of progressive medicine and to show the laity the great field of prevention as applied to obstetric practice as well as to hygiene and sanitary science, and medicine in general.

Study and research never cease, they teach us the better classification of the means at our disposal and to accept or reject the newer ones proposed.

The field of preventive medicine is perhaps equal in obstetric practice to that of any other branch and possibly greater, when we consider that every new born babe comes directly under our care. The duty we owe every child of getting started well in life is one that presents great possibilities in teaching the proper methods of feeding and of hygiene. At this time we are in the midst of an era of manufactured foods. The many claims for excellence have served the good purpose of creating governmental investigation as to the merits possessed by these products and has helped to determine their true worth. In the meantime the enterprising manufacturer has profited enormously from ingeniously advertised foods, trusting a credulous public to forget that these foods can be no better than the original from which they were produced and whose value has been fully known for generations.

"To live wisely, well and strongly, demands not dietetic revolution, but modification and adjustment; not destruction but adaptation." "Trust is rarely found at the extreme points of the pendulum, but lies somewhere within its swing." Right food taking is the basic principle upon which inquiry is founded and its lesson well learned can bring no greater benefits to any class than to the expectant mothers. Our great duty to future generations is not in pointing out new attractive products, but in teaching the mother and the child the proportionate requirements and the best way to procure them.

The question of race improvement is one that has not received any attention from the medical profession up to this time.

This problem must sooner or later be thrust upon us; when it comes the people will turn to the physicians for their advice. Climate and environment will soon have spent their force in this direction and we shall have to turn to the more scientific problem of producing better offsprings if we expect to maintain health, stature, and mental development. The medical profession have been at fault in not insisting to the laity that the happiness of future generations depends entirely upon the breeding of its people. The horseman breeds his horse for a partic-

ular purpose and so well has he accomplished it, that the offspring has intrinsic value before it is developed, but mankind has allowed his kind to be produced with no attention whatever to the offspring, priding himself only upon so-called good blood, no matter how deeply tuberculosis, neuroses, or what not, is seated in the family. Our lines of prevention here are as plain as those of sanitation and ought to be quite as easy of application with proper teaching. We have only to glance about us to see the utter folly of families intermarrying for pecuniary reasons alone, willing to sacrifice their progeny to mediocrity or to imbecility for the Almighty Dollar.

It is the duty of the obstetrician to establish in the minds of the laity the importance of proper regard for the selection of healthy individuals in marriage, and to hold up before the laity the folly of disregarding the consequences to their progeny and to mankind in general. The enactment of laws prohibiting the marriage of degenerates and regulating marriage in general are things that should be discussed by us more thoroughly for the purpose of more careful conclusions in these important matters and such laws and teachings recommended as will finally bring lasting results to mankind.

In my judgment this Society should not confine its work to the more complete technique of bedside work alone, but that it should speedily broaden its usefulness along the lines set forth by these hints. We should lead in these as we always have done in other matters that are for the good of the people.

DIAGNOSIS OF PREGNANCY IN THE EARLY MONTHS

F. W. HAMLIN, M. D.
NEW YORK.

I shall limit the scope of this paper to the first three months, as that is the period during which a diagnosis is most important. In discussing this question it should be stated at the outset that the acquisition of a habit of orderly procedure on the part of the practitioner is an absolute pre-requisite to success in the early diagnosis of pregnancy.

The four steps of the examination should follow this order: History of the patient; Mammary, Abdominal and Pelvic examination. It may be stated as a rule that subjective symptoms should be considered of less importance than the objective symptoms which can be obtained by examination. Attempts to deceive the physician and to conceal the true state of affairs are so common that it behooves the practitioner to take the patient's statements with a grain of salt.

The symptoms obtainable from the patient during the early months are: Cessation of menstruation; nausea and vomiting; irritability of the bladder; and altered or perverted sensations. None of these symptoms is more than presumptive evidence of pregnancy, although the abrupt cessation of menstruation in a woman previously regular, with the occurrence of morning sickness, is a very significant symptom. The other conditions which may cause amenorrhea are well known and need no repetition. The appearance of a scanty flow during the first, and occasionally the second month of gestation is also well known and is usually due to some lesion of the cervix, an endometritis or polyp, or even a placenta previa. Nausea and vomiting may also arise from a variety of conditions other than pregnancy, so that its value as a sign of pregnancy is questionable when no other evidence is obtainable. Irritability of the bladder and morbid sensations are not to be seriously considered as diagnostic features. The mammary signs of pregnancy include enlargement and nodular feel of the breasts; enlargement of the superficial veins; formation of the primary areola and Montgomery's follicles; colostrum at the end of the third month. In primiparae, especially in conjunction with the subjective symptoms already mentioned, these changes in the breast furnish strong presumptive evidence of pregnancy.

Long-continued pelvic disease, various ovarian and uterine disorders, especially tumors, must be excluded. The breast indications are especially valuable in the case of the unmarried suspect. Such cases

require careful management and it is not always possible to suggest a vaginal examination without giving offense. On pretence of examining the heart and lungs it is easy to examine the breasts, which will often show distinctive alterations sufficiently pronounced to warrant further investigation. For the definite diagnosis of pregnancy in the first three months the changes in the uterus which can be detected by a bi-manual examination furnish the most trustworthy indications. To make a satisfactory examination the bladder and rectum should be empty, the corsets removed, and all waistbands loosened. It may be necessary in exceptional cases to put the patient under an anæsthetic. The uterus is caught between the two hands and examined. The outer hand depresses the hypogastrium, to reach low down on the back of the uterus, making gradually increasing pressure as the muscles yield. The patient is instructed to cough or breathe deeply, or her attention is diverted by a question. In this manner the rigidity of the abdominal wall is more readily overcome. Beginning at the junction of the cervix and body of the uterus, the anterior and posterior surfaces are examined for compressibility just above the cervix, then for bulging of the walls of the body, estimating as nearly as possible any increase in thickening, and determining its consistency and amount of resilience; and finally the whole uterus is swung from side to side over the stationary inner finger to appreciate increased breadth and the denser spot. If the fundus lies in the sacral hollow, a tenaculum hooked into the cervix will draw the uterus down within reach of the examining hands.

The cervix is next inspected for color changes. Venous congestion is present in the majority of cases. The dusky discoloration on the anterior vaginal wall below the urinary meatus is especially diagnostic. This venous congestion, of course, may be produced by any condition which causes venous stasis in the pelvic blood vessels and should not, in itself, be considered diagnostic. The cervix also shows a purplish discoloration almost from the first month of conception. This sign is said to be more constantly present than the purple hue of the vagina.

The early changes in the uterus furnish the most reliable evidence of pregnancy to the expert obstetrician. These changes are as follows: Bulging out of the anterior wall of the body of the uterus; elasticity or doughiness of the body; compressibility of the isthmus (Hegar's sign); softening of the cervix. The anterior surface of the virgin uterus is nearly flat, while the posterior surface is convex. From the fourth to the sixth week of pregnancy, during a contraction of the uterus, the outer wall bulges out very perceptibly and the angle between the cervix and the body becomes more acute. The shape of the

uterus at this time may be likened to that of the old-fashioned fat-bellied jug, or to a sphere resting upon a cylinder. During relaxation this shape is not present. During a contraction the body of the impregnated uterus becomes hard and elastic, or even so hard that it may possess no elasticity; while during relaxation it gives to the examining finger the impression of pitting or bogginess. Just above the cervix and between it and the rounded body above, there is a striking absence of resistance, the fingers of the two hands coming closely together. This sign of pregnancy, known as Hegar's sign, is not always present. The yielding sensation may be only partial and yet sufficiently noticeable to be appreciated. Of all the bi-manual signs of pregnancy in the early months this is the most important, and in conjunction with the anterior bulging of the uterine wall and the peculiar consistency of the uterine tissues is highly diagnostic.

The time at which these signs of pregnancy can be determined is the sixth week, on the average. The expert may find them in favorable cases as early as the third or fourth week. At the eighth week they ought to be distinct. The softening of the cervix is noticeable at the second month and progressively increases. By the third month it should be clearly recognized. A similar softening, due to pathological changes, lacks the progressive character. Conditions which may simulate pregnancy in the early months and may obscure the diagnosis by a bi-manual examination are as follows:

First. Intermittent contractions take place in the unimpregnated uterus, but the characteristic alternation of elasticity and bogginess in the uterine tissues is absent, as well as the thinning at the lower uterine segment.

Second. Anteflexion with atrophy at the junction of the cervix and the body will give Hegar's sign upon examination, and the characteristic bulging of the anterior wall. The lack of increase in the size of the uterus and its density, confirmed by a subsequent examination, will demonstrate the true condition.

Third. Hyperæmia, or sub-involution, will give an enlarged uterus, but the history and symptoms of chronic uterine disease, the resistance to touch, and the lack of progressive increase in size will exclude pregnancy.

Fourth. Retroversion with flexion, causing a swollen condition of the uterus, may simulate pregnancy. When the uterus is replaced and shrinkage occurs, the diagnosis is usually clear.

Fifth. A soft, sub-mucous fibroid may obscure the diagnosis. Hæmorrhage, rather than amenorrhea, is the rule when fibroid is present.

DISCUSSION

G. B. STEARNS, M. D.: It occurs to me in connection with the question of diagnosis of pregnancy in the first few months, that we should impress upon the family or the individual coming to us for examination, our helplessness during the first two months. Very frequently after missing one menstrual period the individual will come for examination, and want to know exactly and positively whether pregnant or not, and almost the sex of the fetus. I think it well to impress upon the applicant that we cannot give an opinion in the first two months, at least.

One point not brought out by the paper I have come to look upon as distinctive and almost diagnostic. It is more marked in the later months, and that is the peculiar change in the physiognomy of the mother. Just what that change consists of I do not know. I have looked into the various authorities but have not seen any mention of it may be the alae nasae, I have not decided which. I have made up my mind in such cases that they were pregnant, and by subsequent questioning have found that such was the fact.

GILBERT FITZPATRICK, M. D.: One point I would like to mention right here. The presence of colostrum soon after six weeks from time of last menstruation, especially in primipara, has been said by an authority to be diagnostic of pregnancy. By gently massaging the breast the colostrum will show itself. This authority, the assistant master at Doublin, has staked his reputation on this point.

IMPROVED TECHNIQUE FOR THE PRIMARY REPAIR OF LACERATIONS OF THE PELVIC FLOOR

FLORENCE N. WARD, M. D.
SAN FRANCISCO

I

The statement of the distinguished President of the Edinburgh Obstetrical Society at the last meeting, that the maternal mortality in private practice is nearly double that of half a century ago, is so startling that we cannot help but pause and investigate the conditions rendering such results possible.

Wherein lies the flaw in private work, whereby the results are in such striking contrast with hospital work which now shows almost ideally perfect records.

Though the standards are the same for both classes of patients, yet the technique for private work is so ineffective that a greater or less degree of infection is the rule rather than the exception. There is no doubt that the principal avenues of infection lie in the abrasions and wounds at the entrance of the parturient canal, particularly in the lesions of the perineum and pelvic floor. And it is by calling attention to these lesions, how important a part they play in favoring septic invasion and in perfecting our technique in their treatment that we shall be able to eliminate a very large portion of the pathological lesions occurring during labor and the lying-in period.

Thomas's statement written twenty years ago is as true today as it was when it was written—namely: "The importance of the perineum in this connection cannot be exaggerated. Its rupture furnishes one of the most fruitful sources of absorption of septic elements and I do not hesitate to say that thousands of women suffer throughout their lives from uterine displacements, engorgements and vesical and rectal prolapse in consequence of injuries inflicted upon it during the parturient act."

Such teaching has had its influence upon the profession with the result of greater care in the management of these injuries. The results, however, are far from perfect as every gynaecologist can attest when he reviews the numberless cases of ill-health, that can be directly traceable to these lesions, the cystoceles, the rectoceles, the prolapse,—and, to quote from Hirst: "If the physician multiplies his experience by that of thousands of his colleagues in America, if he reflects that everyone of these conditions represents the fault of a physician, that

everyone of them could have been prevented or cured without delay, he must be appalled by the thought that the medical profession itself is responsible for five-sixths of the diseases of women as we see them to-day."

Two prerequisites are essential for the successful repair of the perineum. First, a knowledge of the anatomy and function of the pelvic floor, and, second, a good working aseptic technique, elastic enough to meet the varying needs of different cases, and yet perfect enough to allow of no possibility of infection.

A few words as to the essential points concerning the formation of the outlet of the pelvis; so much has beeen written upon the perineum and the pelvic floor and yet there remains many vague and erroneous ideas as to its purpose and formation.

The old idea of the central perineal body forming the main support of the pelvic contents has been abandoned by most authorities and proper attention is now given to the muscular layer and its fascia which forms the true support of the outlet of the pelvis.

Practically the only muscles are the levator ani, composed of the pubo-coccygens and pubo-rectalis with its wide origin from the lower border of the symphisis, the body of the pubes, the descending rami of the pubes and the obturator fascia. These fibres sweep downward, encircle the vagina and rectum and send interlacing fibres to its fellows of the opposite side in the median line at the perineal flexure and are gathered together and inserted into the coccyx and lower part of sacrum.

This muscle with its fascia forms the great muscular diaphragm of the inferior strait. It produces the characteristic perineal flexure of the rectum and vagina, it closes the pelvis and in its integrity holds the sacral segment well under the pubic segment. It undergoes extreme elongation during the dilation of the pubic outlet for the passage of the child and is extremely liable to rupture or laceration. It is extremely important to understand the relation of this muscle to the lateral walls of the vagina in our treatment of its lacerations.

On passing the finger into the vagina, the so-called point of angulation can be discerned about 2 c. m. within the hymen and tracing from this point, the edge of the muscle can be distinctly felt laterally in its course toward the symphisis pubes.

What are the changes resulting from its laceration?

I. Lengthening of the muscle with a loss of its contracting power.

II. The vagina loses its perineal flexure or angularity.

III. The posterior vaginal wall recedes from the pubic arch and the ostium vaginae is enlarged and lax.

IV. The perineal furrow has lost much of its depth.

V. The anus lies, instead of anterior, posterior to the line drawn from tuber ischii.

The lacerations resulting from its extreme dilation are of various degrees and kinds,—for practical working purposes, there is no need of the elaborate classification attempted in many of the works upon obstetrics. They may be divided into:

I. Those involving the tissues between lower end of the rectum and vaginal opening external to the muscular layer.

II. Those involving laceration of sphincter ani.

III. Those involving muscles of the pelvic floor.

IV. Combination of any or all three of these lacerations.

The object of the repair is not only to close the rent to bring together raw surfaces to prevent septic absorption, but to bring together the divided ends of the muscles, so as to restore their elevating or sphincteric action at the vaginal opening.

II. SURGICAL TECHNIQUE

The underlying principle to be observed is that from the time laceration of the pelvic floor occurs, *the case then becomes a surgical one and must be treated upon the most approved surgical principles both at the time and until repair is fully accomplished.*

How is this to be done? The difficulties are so many, the marvel is that the failures are not more frequent than they are. Let us glance for a moment at the conditions prevailing when the laceration occurs. The physician is alone usually without skilled assistants, except what aid the nurse may render. The patient is usually a primipara, exhausted by a severe labor with more or less free flow of blood pouring over the wound; the surrounding parts are more or less contaminated and finally there is a wound in the most difficult part of the body to keep clean, a wound in close proximity to three outlets of the body with their discharges. The wound itself presents ecchymosed and oedematous tissue with ragged edges irregularly zigzagging into the deeper structures.

The first step is after examining and discovering the lesion to acknowledge its existence and take immediate steps for its repair. Place a sterile gauze pad over the wound until the preparations are complete for the work. It is no opprobrium that such an accident has occurred. In this era, when the foetal head is disproportionately large and the pelvis small with its weak musculature, it is rare for the primipara to escape without some rupture. The day of the old practitioner "who has had over a thousand cases with never a laceration" is passed,

I would advise that the patient be lifted out of bed and placed upon a table, if possible upon a Kelly pad. It is impossible to do the work properly with the patient upon the soft yielding mattress, and the operator kneeling or stooping over her. It is much better to have the patient gently lifted upon a table, in a good light and where the operator can sit down in front of her. Have her legs flexed upon the abdomen and held in place by a leg supporter. If possible send for another physician to give the anæsthetic, as it is almost impossible for the obstetrician to superintend the anæsthesia, to see that the uterus is properly contracted and make a good repair at the same time. Next give the patient a thorough external cleansing, after the anæsthetic has been given. Place fresh gauze pads about the field of operation, or, what I like better, a large square of silkite or rubber dam, freshly boiled, and with a central incision large enough for the immediate field of operation.

The nurse should sterilize her hands and take her place on the right of the patient facing the physician, her left hand should be kept constantly over the fundus of the uterus to maintain good contraction, leaving the right hand to assist in holding sutures or sponges or whatever the physician may direct.

Each physician should go to a case of confinement with the necessary preparations for repair. The fewer the instruments the better; they should be freshly boiled and should consist of

One pair of scissors,

One-half dozen pairs of artery forceps,

One Peaslee's perineal needle (or if preferred one needle holder and one-half dozen medium and large curved Martin needles),

One pair tissue forceps.

The best ligatures for immediate repair are silkworm gut which is an ideal suture for this kind of work, and chromatized catgut for buried sutures for uniting divided muscles or for cutaneous stitching. The sizes of catgut that may be needed are Nos. 1, 2, and 3, each size coming in a separate hermetically sealed glass tube, to be broken at the time of operation. Silkworm is best carried similarly prepared. In case the physician cannot obtain the silkworm gut in the market, he can readily prepare it himself at his office for each confinement case. It is best not to depend upon the sterilization of the ligatures at the time of the operation. Take a glass tube 10 inches long and pass a dozen silkworm gut sutures into it. Place the tube in a test tube, fill the tube with alcohol, cork it and boil it for fifteen minutes; at the time of the operation the glass tube containing the silkworm can be dropped from the test tube upon a sterile gauze and each strand withdrawn as needed.

If rubber gloves have been worn through the confinement, they should be removed and reboiled before beginning the repair. The field of operation should be irrigated by a constant flow of normal salt solution or salt and soda solution in the proportion of 7½ per cent salt to 2½ per cent soda, or the wound, if preferred, may be sponged with dry sterile gauze sponges.

Before introducing the sutures, a careful examination should be made to determine the nature of the rupture. If the muscles are involved, if the laceration has extended into either sulcus of the vagina, the retracted ends of the levator ani should be seized by tissue forceps and drawn down and sutured by buried catgut. This is the most important step in restoring the integrity of the separated muscles and time and skillful attention should be given to their nice coaptation. The deep vaginal silkworm gut sutures should then be taken, care being used to make a wide sweep deep out in the lateral muscular tissue to gather in any retracted fibres. After which the skin perineal sutures should be taken. The ends of each suture should be clamped with artery forceps placed one after another upon the pubes out of the way. They should be tied from above downward, care being exercised that all oozing be stopped and that no dead spaces be left. Before approximating the edges of the wound and tying, all frayed or ragged edges should be clipped away. In case the laceration has involved the sphincter ani, the rectal mucous membrane should be united with catgut, after which the retracted ends of the anal muscle should be united by sutures of silkworm gut passed deeply into the divided ends and brought closely together and the operation continued the same as for incomplete tears.

Some cutaneous catgut sutures may be needed to accurately coapt the cutaneous margins, especial care being exercised for complete closure near the anal margin, that portion of the wound most apt to be contaminated. A basin of bichloride solution should stand conveniently near in case of accidental contamination of the hands that they may be plunged into the solution. In case the finger is passed into the rectum to facilitate the introduction of the deep sutures, the rubber glove of that hand must be freshly sterilized, or if rubber gloves have not been worn, the finger must be protected by a freshly sterilized rubber cot, to be removed before taking up the next stage of the operation. After drying the wound, plenty of sterile gauzes is placed at the vulva and the patient put back to bed.

The after treatment consists in spraying the vulva after each urination and defecation with salt or sterile solution and the application of sterile dresssings. The nurse should be instructed to scrub her hands

and pass them through bichloride solution each time before touching the vulva.

Under these precautions, primary union should be secured with resulting normal function of the pelvic floor, without scar tissue to limit the action of the levator ani or retracted fibres to weaken its contractile power.

DISCUSSION

E. STILLMAN BAILEY, M. D.: Two points are suggested in reading the excellent paper presented by Dr. Florence Ward.

First. I most cheerfully subscribe to all that has been said and recommended in the essay. The woman just having finished the third stage of labor has passed technically from the obstetrician to the surgeon, by reason of the conditions that are and have been present.

The next step is to examine for lacerations and hemorrhage, and, if found, to repair the former and control the latter. There is everything to gain and nothing to lose in such a search. Neglect brings disgrace on the profession. Repair and success adds to the dignity of the calling.

The majority of the cases I have had to care for in an operative way that did not meet with success in healing after repair work, were cases that did not have good nursing during the lying in. To avoid the loss of desired results in those too poor to have a trained nurse I have almost universally insisted that the bowels be let alone until the third or fourth day following delivery and repair. This point I got from experience and if the bowels are "locked" as viewed by the public and "opened" on definite time, in a majority of cases the laceration will so far have united that they will not be soiled and infection will be prevented.. To prevent the bowel accumulations becoming hard and making the defecation difficult I have the first bowel movement attempted after an enema of four ounces of olive oil. The worst failure I ever met with was where the otherwise good operation for repair was lost on the second day by a trained nurse moving the bowels by "improved methods" and allowing the stitches to remain soiled.

Second. The doctor, obstetrician or surgeon who always continues in the one way of doing things connected with the lying-in-room is certain to make mistakes sooner or later. There is a certain progress in the art that makes it imperative to improve on some of the details. Note what Dr. Ward says about the use of suture materials. One doctor said in public: "I always use catgut suture material for repair work, for then I don't have to bother with removing the stitches." Now, as a matter of fact, I had to do one of his poor jobs over, because the catgut he used failed to hold the parts after the third day. He does not know of his failures because he never looks after the cases. Poor surgery and poorer obstetrics. Care, plenty of it, attention and intelligent observation of many points alone bring the measure of success to the mother, and really she is the one to be most considered in all these various attentions to details. The home treatment of confinement cases should be made as perfect as the hospital cases, but filth, carelessness

and "absent treatment" won't do in this department of work and the charge of a higher mortality at the home than at the hospital is serious enough to awaken a renewed determination to guard every possible avenue against failure.

Cleanliness, technique, care, time, attention to details—these are the points, and the essayist graphically tells how to improve the present faulty methods. I shall heed the observations in the paper just read.

MARGARET KOCH, M. D.:; It is a great disappointment to me to be unable to hear the discussion of Dr. Ward's most valuable paper. It is complete and up-to-date, and I heartily endorse every word of it.

I am glad she emphasizes the fact of the case becoming a surgical one from the moment a laceration occurs, and the importance of surgical cleanliness throughout. I believe we would have a satisfactory primary union in a much larger per cent of cases, and fewer septic ones, if this were oftener borne in mind. Another point I am glad to have emphasized is the importance of having skilled assistance if possible. It is impossible for any obstetrician to superintend the giving of the anaesthetic and do good surgical work at the same time. Either the patient is in danger from the anaesthetic or the surgical work suffers, to say nothing of the strain on the doctor's nerves.

The technique of her operation I most heartily approve in theory; practically I confess it is often difficult to carry out. When there is a simple straight laceration it is well, but in an irregular ragged tear it is extremely difficult to always place the sutures with such exacting nicety; however, the greatest pains must be taken to have the torn muscles accurately united.

In the after treatment in addition to spraying the vulva after each urination and defecation, I like to use a douche of a 1 to 10,000 or 15,000 formaldehyde solution. The formalin stimulates the healing process, keeps the surfaces clean and free from any unpleasant odor, and is safer and more effective than a bichloride solution of equal strength.

D. A. FOOTE, M. D.: I cannot believe that conditions obtain in America such as will warrant any such assertion as that made by our Edinburg professor. It is not the experience of American physicians, I am sure, that the mortality in obstetrical work has greatly increased in the last twenty years. It certainly has been more favorable in the last twenty years. I hope that our essayist, or somebody interested, will take pains to collect the American statistics, because I think they will be full of good cheer to us. I cannot believe that that statement is true here. I wish simply to say one word, and that is as to the aseptic care of the perineum after rupture. Just the day before I left I removed the stitches from my five hundred and twenty-fourth case of confinement. In most of my cases I use forceps, and in most of the cases I have lacerations, and I have yet to have, in those five hundred and twenty-four cases, one drop of pus or one septic case. That is due, I think, to the teachings in college, which made me perform an operation in an obstetrical case with just as much care as I would in laparotomy. Everything is aseptic from start to finish, and the appli-

cation of the perineal pad is changed every two hours, under as strict antiseptic precautions as you would dress a wound, and I assure you that the statement I have just made is absolutely true, that I never had a drop of pus nor never had a septic case. I think it is due to thorough antisepsis. I have my nurse have her bowl there in which she immerses her hands and keeps them constantly aseptic throughout the entire case. She is instructed that every time she makes a change of the pad she is to go through the same process, and she does it. I believe that the reunion of lacerated perinei is the rule. I believe that a great many cases unite where no stitches are taken, where the laceration is not severe. I cannot believe that Nature leaves us in the lurch in these cases. I think she helps us a great deal, and I believe with proper aseptic precautions we will very rarely have any septic conditions.

W. E. GREEN, M. D.: While I want especially to compliment this paper, I want, still more emphatically, to compliment Dr. Foote on his peculiarly good results in asepsis in obstetrical work. I can not tell you how much the atmosphere about Omaha has to do with the five hundred and twenty odd cases without a drop of pus, but in my country—and I believe that is true in regard to surgeons generally—we get no such results as he speaks of. Now, do not understand me to be casting any insinuations at all, because I believe every word you say, Dr. Foote, but the time has come when the laity demands of the physician more care than we have hitherto bestowed upon the cases. If a physician leaves his obstetrical case without repairing these injuries he is censured by the friends of the family. They know that those cases should be repaired. They know that other physicians repair them, and they know that good results follow those repairs, and they are frequently saved from a secondary operation. It is very becoming in the obstetrician not only to go prepared to deliver his cases with instruments, if necessary to save the suffering of the mother and prevent the death of the child, but it is also as necessary for him to go prepared to handle these cases in a thorough surgical manner. An obstetrician should not only be a physician and a good obstetrician, but he should be skilled with surgical knowledge as well. There is really more depending upon the obstetrician than upon any other specialist in medicine. Every young physician should be taught that the very first case which he has in obstetrics may not only be a complicated case, but may be one that demands the highest skill at his hands. Therefore it is more necessary that the young man should go out well versed in obstetrics than in any other department of medicine. In my obstetrical work I make it a point always to employ trained nurses. I make a demand upon my patients that they must have a trained nurse, otherwise I tell them, "I will not attend your case." I have that nurse prepare my obstetrical case the same as though it was going to be a surgical operation. I have her shaved, and scrubbed and rendered as nearly aseptic as possible. We all know that we get about 25 or 30 per cent of tears in primipara, and those tears should be repaired at once, and the doctor has told you the proper way of doing it. In the first place you have devitalized tissue, you have ragged tissue there, and that wound must

first be rendered clean-cut and free from that devitalized tissue. The first thing after cleansing my patient I take my scissors and pair of forceps; I put her on the table; I have an expert anesthetizer at hand—you can always get them. There is nothing left out of these cases to insure success, and then with a pair of forceps and scissors I cut away all jagged and devitalized tissue. Then I close it up much as the doctor does, only instead of using silk-worm sutures I use catgut. I never could see the necessity of putting in those stitches that had to be removed and thus give the patient a great deal of pain, because catgut is absorbable, and is absorbed in the tissue and will answer the purpose. I close up my muscular structures with buried sutures, then I close over this with superficial stitches and that will hold them in position until they unite.

E. E. Allen, M. D.: I want to say a word about the repair of the perineum, and I wish to direct my remarks to the younger physicians. Now, the question might arise in the mind of the young physician when called to his first case as to where he shall place his first stitch; shall he make it on the skin surface or go inside? The first thing after thoroughly cleansing the parts is to take a long piece of gauze and pack it carefully around the cervix and keep on packing until the parts behind the laceration are covered, to forbid the flow of blood, and then you will have a clean surface to work over. The first stitch you make should be made with catgut, and should take the mucous surface at the top of the wound, on the right side, taking in all tissue coming out on the other side. No exposure of the needle from its entrance until its exit from the other side. Then the next stitch, coming toward the front, and so on until you have placed three or four stiches. Then tie your mucous stitches at the top edge of the mucous surfaces adjoining the cuticle. Take your next stitch through the floor of the wound, through the skin surface with silk worm or silver wire; then close up the wound; remove the tampon, irrigate and repeat the irrigation every day or every other day, to keep the parts clean.

Geo. R. Southwick, M. D.: I have a word for the young men. At the present time I believe the young men themselves are pretty well trained in surgery, and I believe the young man of today is better trained in antiseptics than any of his colleagues who graduated ten years preceding. I would trust the antisepsis of the young man sooner than I would the older man, so I think these remarks of the doctor should be addressed to all of us rather than solely to the recent graduate. In regard to the closure of the perineal wound the young graduate is apt to consider it a wound, anyway, and he will proceed under antiseptic care, if possible, bringing the parts into coaptation, as accurately as possible, holding them there. It is a common sense treatment which you apply to wounds in any part of the body. He wants to see what he is about when he operates on a wound; he wants to have a clean field bringing the parts together as smoothly as possible and so they will heal as well. He simply puts into practice the common everyday principles, whether the wound be in the perineum or in a man's leg, that his teacher of surgery has instilled into him. He places the

patient in such a position as he can see what he is doing, and does not operate in the dark. He simply applies common every day principles in surgery. He very likely uses catgut because he knows that catgut is absorbable, that it is more comfortable to the patient, and very often, I believe will use a few strands of silk worm to hold the parts together, because he knows that once in a while and one or two sutures are needed to hold the parts in position until healing is complete. I think sometimes he makes too much of the surgery of the perineum, but it is simply ordinary wound treatment and common sense surgery all through the case. Personally I have found ordinary catgut better than chromicized. I believe one point in ordinary wound treatment would be to bring those surfaces in accurate apposition, but in these cases it is a difficult matter to do. The most of the stitches are placed within the vagina, these are brought forward one by one, taking the utmost pains to bring the parts together, and then two or three stitches in the skin surface completes the operation.

L. L. DANFORTH, M. D.: This subject is of such importance that I cannot refrain from saying a word upon it, as the welfare of our patients depends upon the thoroughness with which antiseptic conditions are obtained at the time we perform this difficult operation. I do not think it a simple one; I think it is a difficult one. Imagine the circumstances under which this is undertaken. After a long night of suffering on the part of the patient, and the wearisome labor of the doctor as he has tried to cheer his patient and encourage her that all was right, and then after the close of the labor be compelled to perform this operation. Everything is dirty and filthy and he undertakes to perform a perfectly aseptic operation. If he would do the operation as it should be done, he must have everything ready. To have this done he must provide himself with an obstetric bag with every detail for aseptic work. I need not mention these details; we all know them, and should apply them more frequently than we do. There seem to be some difference of opinion as to the kind of sutures most desirable. I am most emphatically in favor of silk worm gut. For buried sutures catgut will answer every purpose, but I am afraid to trust it entirely, as it is absorbed too quickly should pyogenic infection ensue in any case, and is not satisfactory in my opinion. I have learned from distressing experience how unsatisfactory cat gut is, and I have come to depend upon silk worm sutures altogether. For the more superficial or those stitches high up in the vagina I use cat gut, but for the purpose of support the silk worm suture is eminently the best. These are more painful to the patient and require more care in removing, but I think we are justified in resorting to them.

A word in reference to statistics. One gentleman has spoken of statistics at the present time, as being less favorable than formerly. Some years ago I took the trouble to appeal to the health and mortality statistics of the health board of New York city, covering a period of twenty years, and while my memory is not exactly accurate as to the correct statistics, I can positively say that in the period covered, from 1873 or '74 to '94, the mortality ranged four or five per cent down to

one and a fourth or one and a half per cent. These figures are from the Charity Hospital on Blackwell's Island. During the latter portion of the time the mortality was less and had come down to the last figures mentioned.

B. H. OGDEN, M. D.: I would like to add my testimony to that of Dr. Danforth about silk-worm gut. I must say that I strongly approve it. I have seen many failures from cat-gut sutures absorbing too quickly. We have heard of the frequency of lacerations, and I think it is far above what has been stated here in the meeting. In my experience it is far above thirty per cent in primiparal. I believe it is important in every case to put one finger in the rectum in order to push forward the posterior wall of the vagina that it may be examined, and many times you will find a laceration which externally does not show at all. The finger can easily be cleansed after such an examination and you have the great advantage of knowing the exact nature of the tear with which you have to deal.

L. K. MAXWELL, M. D.: In giving advice to the young physician I want to speak from the standpoint of the country practitioner. Many things suggested here are easily done in the city which are not so easily done in the country. I feel that asepsis is absolutely essential in these cases. With the city physician it is easy to call in assistance at any time because you have physicians within easy reach. In the country you do not have this, and many times may have to send miles for help. In these cases we find the tissues are so benumbed from pressure at the time of delivery that if you have given any anesthetic at all you have the patient in such condition that you can perform all the operative work necessary without any further anesthetic. I invariably examine my patient to note what is going to be necessary to use, then I have every instrument likely to be needed thoroughly sterilized and ready for use when necessary. In many of these cases you do not have nor can you get skilled assistants and you have to depend on those who are not aseptic and whom you cannot impress with the value of strict *antisepsis*. Under such circumstances I invariably do all the work myself, handling everything that must be touched, the patient as well. I think in Dr. Foote's particular work, the large number of lacerations he mentions is either a reflection on Dr. Foote's work or on his forceps. I feel that with properly constructed forceps and the proper use of them there is no more reason for laceration than in normal delivery. With proper opportunity for delivery the laceration (that is one requiring surgical treatment) is not so common as has been mentioned by other speakers. Dr. Green certainly has perfect aseptic technique, and I wonder that one with such perfect technique should have so much pus.

WILSON A. SMITH, M. D.: This is a very interesting paper, and equally interesting discussion of an important subject, but I believe Dr. Maxwell expressed the thoughts of every physician who makes a living by milking cows, making butter, and who has a sign upon his door telling people that incidentally he is a doctor. It is very easy

to stand within the shadow of a great hospital with its corps of trained nurses, and say to the good man and the good woman who are expecting to be progenitors of a George Washington, or a Ulysses S. Grant, or some equally great a man, "I will not touch the case unless you secure a trained nurse." But let Dr. Green go, as I have gone, out on the country roads, knee deep in mud so thick and sticky you must go horseback, because a buggy can not be pulled through, out eleven miles into the country, eleven miles from any sort of skilled assistance, into a house with but one bed-room and one living-room, and find the woman in labor; then I would like to hear him say, "You have got to have a trained nurse or I will not touch the case." The man who has to ride horseback has these cases of obstetrical work as well as you in the city. He is as anxious to do good work as you—and he does it. The pioneer doctor who stands like a sentinel on the border-land of civilization and who rises to meet every occasion, whose genius leads him out of almost insurmountable difficulties, is entitled to great respect, and a greater homage is due to him than to his city brother whose work is done while surrounded with every convenience known to medical science. We sometimes are forced to operate and do the best we can under the most septic conditions, and often are surprised at the good results obtained. I recall an instance of the meeting held in Atlantic City, when Dr. Sarah J. Millsop, one of the most lovable members of this Institute, related her experience with a case wherein the conditions were decidedly unsanitary, and yet the woman recovered and has had perfect health since. When you see these things, and the fact that another one of your patients, surrounded with all skill you may wish for, trained nurses to do your bidding, and perfect asepsis is secured, that her confinement is followed by infection and death, you feel there is still something else besides infection which lands one woman in the cemetery and does not affect the other.

E. B. Nash, M. D.: I have been very much interested in this discussion. I believe in thorough antisepsis. I was called not long ago to help a lady doctor who had been attending a woman in a house as free from cleanliness as you could imagine. After a great deal of difficulty with an hour-glass contraction we succeeded in removing the placenta. There was some laceration which I supposed the lady physician would take care of, but the house was so dirty she did not take any pains with her at all. When I came to inquire of her as to how her patient was getting along she replied, "All right," and added, "You need not talk to me any more about 'germs.'"

W. F. Fryer, M. D.: I wish to speak of a case I had some two years ago. One cold winter night a small boy came to my office and said his mother was sick and wanted me to go over with him. He had on a light coat, and I gave him an overcoat and told him to get in and ride with me to see his mother. When I got there this woman was in labor, her husband away from home. There was one room in the house, and, I guess, a woodshed. I believe there was a little girl in one corner of the room sleeping. I called for some water, made a fire—it was nearly out—boiled the water, scrubbed my

hands and made an examination, discovering a breech presentation, but everything normal. She delivered a boy, or a girl—I don't know which. Her husband came home the next day. I left towards morning. The boy, a very little one for twelve years of age, was instructed to keep up the fire and to get some one to come and take care of the mother. No one came in all through her lying-in, and she never had any trouble at all. She got up nicely, is very healthy, and has had two or three children since.

GILBERT FITZPATRICK, M. D.: I want to protest against the practice of putting a finger into the rectum for the purpose of diagnosing a rupture. If the sense of touch is properly educated there is no need of inserting the finger into such a contaminating place.

FLORENCE N. WARD, M. D: I have very little to say in closing the discussion. I want to congratulate Dr. Foote upon the remarkable results he has obtained, which results are simply due to following up a perfectly aseptic technique. I cannot agree with his statement that he thought nature took care of a lacerated perineum. When you have a torn and lacerated surface, an excellent point for septic absorption, and with union incomplete of the muscles we can not possibly have as good perinei before, as there is after repair, no matter how small the operation. I can heartily endorse Dr. Green's statement and the position he takes, in reference to the immediate repair of the perineum, and I feel that he has the true spirit in reference to such work. With his use of catgut I must differ, because of the fact that where you have discharge flowing over these stitched surfaces we are very apt to have softening and absorption, sometimes too soon.

THE TREATMENT OF PUERPERAL INFECTION

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In spite of all that has been written upon the subject of the etiology and prophylaxis of puerperal infection, it is by no means a rare occurrence for a consultant to meet well-marked cases during the lying-in, and the mortality list shows that puerperal infection is responsible for almost as many deaths in private work as before the era of antisepsis and asepsis. This is certainly a lamentable fact and is due, not to lack of knowledge as to the cause of the trouble but to carelessness in not properly safeguarding the patient from wound infection.

There is no doubt but that our present ideas of the etiology and prophylaxis of puerperal infection are for the most part correct and little can be added to them. If the chain of asepsis is complete, we need have no fear of an infection, but it is the breaks in the chain on the part of the physician and nurse which permit the occurrence of trouble.

It cannot be said, however, that we have positive knowledge of the means of treatment of a puerperal infection or that what knowledge we do have is widely disseminated among the profession. While there is little need of further discussion in society papers of means of prophylaxis, there is, it seems to me, great need of more general knowledge regarding treatment. My paper, therefore, is devoted chiefly to a consideration of the curative treatment of puerperal infection and little will be said regarding prophylactic treatment.

I wish to preface my remarks regarding treatment by calling attention to the importance of a knowledge of surgical pathology and surgical technique in obstetrical work. I believe that the greatest obstacle to the adoption of a successful prophylactic technique in obstetric work has been that physicians in general practice have been unable to develop a proper appreciation of surgical cleanliness. The same conception of surgical cleanliness is required in obstetric work as in abdominal surgery and unless the physician knows how to secure and maintain it, his record will be marred by cases of infection.

The same conditions hold in the treatment of puerperal infection. Puerperal infection differs in no respect from any other wound infection and requires the same methods of diagnosis and treatment, in fact, there is no other form of wound infection that requires as prompt diagnosis and radical treatment.

I therefore believe that obstetric practice requires a thorough knowledge of methods of surgical diagnosis and treatment, in fact, that obstetrics should be considered a branch of surgery, and when the time comes that it is so considered by the profession and the laity as well, more care will be taken in prophylaxis, and what is of equal importance, obstetric practice will be better paid.

Diagnosis—Much of the trouble in the management of puerperal infection is due to the fact that the condition does not receive early recognition. The surgeon watches the constitutional symptoms and is guided by them in his treatment, but in an obstetric case the practice is altogether too common to adopt an expectant plan of treatment when the temperature curve goes up to 1000 F., on the second, third or fourth day. Instead of this, it should be the rule that if a patient who has been doing well for twenty-four hours after delivery, has a rise of temperature of 1000 F., immediate steps should be taken to rule out or combat an infection. Other causes for the constitutional symptoms may be found and removed but if an infection is the cause, its early recognition and treatment may save further trouble.

For the purposes of treatment the first step in the diagnosis is to determine the kind of infection to be dealt with, whether saprophytic, that due to putrefactive organisms which are growing and developing in dead organic matter, or parasitic, that due to organisms which have entered or will enter the general blood current. In well advanced cases this determination can be made by the objective symptoms—if of the putrid variety, the lochial discharge is foul and mixed with debris; if of the pyogenic variety there is no odor, but in the majority of cases the vaginal and cervical wounds will be found covered with gray coagulated lymph. The determination, however, should be made by early bacteriological examination of the lochial discharge by Doderlein's or Williams' method. This is essentially as follows: The patient is placed in Sim's position, the womb exposed with a suitable speculum and brought down with a vulsella forceps. The vagina is irrigated with sterile saline solution and the lochial discharge wiped away from the cervix with sterile cotton. A sterile glass tube, ten inches long and slightly curved at one end is then introduced within the uterus. Uterine lochia is withdrawn into the tube by means of suction from a bulb or glass syringe. After removing the tube from the uterus, its ends are sealed with wax and it is taken to the laboratory where cultures are made from its contents.

If the infection is sapremic, putrid or saprophytic organisms will be obtained. If the infection is septic the cultures will show growth of pyogenic organisms, probably the streptococci. This information

regarding the character of the infection is positive and the treatment of one form will be entirely different from the treatment of the other.

At the time of securing the specimen of uterine lochia it is good practice to introduce the sterile finger within the uterus and determine by the sense of touch whether loose masses of putrid material are present, and if present to remove them. Examination should also be made to determine the presence of any parametritic inflammation. Following this examination the uterine cavity is irrigated with sterile water.

Treatment—I wish to speak of only one point in prophylactic treatment, namely, the importance of sewing every tear of the *vaginal* mucous membrane. It is of course assumed that all tears of the perineum will be repaired, but it is common practice to leave small tears of the anterior vaginal wall and the lateral sulci to heal by granulation. This is a serious mistake and often in cases of mild infection these tears are found to be infected while a repaired perineum is uninfected at first. It is my practice to sew these tears while waiting for the delivery of the placenta and also to introduce the sutures for the perineum. Examination and repair of the cervix should not be made immediately after labor except in cases where a hemorrhage requires it to determine the source.

As has been said above, the kind of treatment for a puerperal infection depends entirely upon the results of the bacteriological examination of the uterine lochia.

If the organisms are found to be saprophytic, the principal object of the treatment is to remove the putrid material from the uterus as quickly as possible. The combatting of the septic intoxication resulting from the absorption of toxins is a secondary matter, as frequently these symptoms of septic intoxication require no special treatment after their cause is removed.

The question of instrumental curettage should be decided entirely by the condition of the endometrium. If there is decomposing debris within the uterine cavity, effort should be made to remove it by means of the aseptic finger, aided by irrigations of sterile water and only when this method is a failure should the blunt and sharp curette be used.

Curettage, either with the aseptic finger or with instruments, should always be done under surgical anesthesia. Without it thoroughness is impossible. It is a good plan to begin the anaesthesia with ethyl chloride and in many cases it will be sufficient for all that is necessary to be done. The curettage should be done under the strictest

asepsis and the operator should not consider his work finished until he has satisfied himself by means of digital exploration that the uterine cavity is smooth and free from debris. Once curettage is thoroughly done, it should not be repeated.

In well advanced cases of putrid infection where the uterus is soft and boggy and which do not yield to a thorough curettage, I have found that continuous intrauterine irrigation with sterile salt solution for twelve to twenty-four hours has had a marked action in restoring a healthy condition. In such cases, also, where there was a putrid endometritis involving the entire endometrium I have used potassium permanganate irrigations, 1-1000, and have found them an excellent means of controlling the putrefaction. The breaking down and removal of the debris can be hastened very materially by swabbing the endometrium with pure carbolic acid or a ten per cent solution of nitrate of silver. If there is faulty contraction of the uterus—and there is most always such a condition—fl. ex. ergot should be given to secure firm contraction, thereby occluding the lymphatics of the uterine wall, and thus preventing the absorption of saprophytic toxins.

I do not believe in packing the uterus in putrid endometritis. No obstacle should be placed to the free drainage of the uterine cavity and gauze, no matter how loosely placed in the cervical canal will act as a plug. The same objection does not apply to loose gauze in the vagina to act by capillary attraction in carrying the discharges to the vulvar pad. I believe, though, that such packing is unnecessary and subjects the patient to needless manipulation. Vaginal douches of sterile water or weak permanganate of potash solution should be given as often as every six hours if there is much odor.

The constitutional treatment of a sapremic infection is the same as for septicaemia and will be considered under that head. If instead of putrefactive organisms, the bacteriological examination of the uterine lochia shows the presence of pyogenic bacteria, no local treatment should be given but the most energetic constitutional treatment should be at once instituted. This statement applies only to those cases of septicaemia arising from uncomplicated septic endometritis. Suitable surgical treatment must be instituted for any extension of the pyogenic inflammation outside of the uterus.

I believe that it is the neglect of thorough constitutional treatment in cases of puerperal septicaemia that leads to fatalities. Nature in the majority of cases, will be able to overcome the invasion of infectious micro-organisms provided the resisting power of the body is stimulated. This stimulation must be systematically planned and thoroughly executed.

One of the most reliable means of increasing the resisting power of the body is the administration of alcohol. It is a clinical fact often noted in surgical practice, that septic patients can take larger quantities of alcohol than normal individuals without experiencing its usual physiologic effect. I give it in amounts corresponding to the degree of infection. Patients with a morning temperature of 102° F. can easily take eight ounces or more of whiskey in twenty-four hours.

Strychnia sulphate, in doses of 1-30 gr. every four hours will stimulate the resisting power and I give it thus. It is best given with the whiskey.

Food and drink are essential elements of the constitutional treatment. The food should be predominately tissue-forming and should be given in a partially predigested form up to the assimilative capacity of the alimentary tract. Milk, beef-juice and egg albumen can be given in a variety of ways at three hour intervals throughout the twenty-four hours. The digestive and assimilative functions of the stomach and intestines will be better and longer retained if all water that is taken is hot, and I always give six ounces of hot water every three hours or more if there is thirst. With this amount of fluid the functional activity of the kidneys and skin is increased and more waste products are eliminated. Hot fomentations applied to the abdomen are of great benefit, in promoting absorption of food, and if there is an albuminuria I use a hot abdominal pack.

The use of normal saline infusion in the therapeutics of septicæmia has passed beyond the experimental stage, as is shown by the increasing number of articles upon the subject. There is no doubt but that its use increases the phagocytic powers of the organism and its use is, therefore, imperative in all forms of septicaemia, no matter what the infecting organism may be. Erklentz (Therapie der Gegenwart, Jan., 1903) has reported experiments which show that "animals treated by salt infusion after otherwise fatal septic intoxication, survived and their organs showed little trace of the intoxication to which the control animals all succumb with severe alterations in their organs." All clinical observations thus far reported confirm the results of these experiments and these clinical reports are so uniform in their results that the question arises whether, perhaps, the real curative treatment of all septic conditions has not been discovered. I have used saline infusions in the treatment of puerperal septicaemia since 1900. In sapremic infections I have used it when the constitutional symptoms did not abate within twenty-four hours after the cleansing of the uterus. In septicaemic cases I have used it from the first onset of the infection.

Of the three methods of use of saline infusion, enteroclysis, hypodermoclysis and intravenous, the two last are preferable. Enteroclysis is inaccurate as to the amount of fluid actually taken into the circulation and is moreover, often distressing to the patient. Another important point is that small amounts of the fluid injected at regular and shorter intervals are more efficacious than larger amounts at longer intervals. It is a question in my mind whether the saline solution acts by "washing" the blood, as is claimed by some writers. It seems more reasonable to suppose that it acts by supplying a vital element to the blood. I have had better results from the use of saline solution since I have used an isotonic solution, after the formula of Locke. (Sodium chloride, oz. 2½, Calcium chloride, gr. 3¾, potassium chloride, gr. 1½ to a quart of water.)

The technique which I follow for hypodermoclysis is as follows: An aspirating needle of medium size is attached to a rubber tube, the other end of which is attached to the outlet of a graduated aspirator bottle. This bottle is filled with the saline solution at a temperature of 115° F. and the fluid allowed to run until the tube and needle are filled with the solution. . The site chosen for the injection—preferably the breasts or the anterior midaxillary line—is made surgically clean and the needle inserted. The aspirating bottle is elevated from one to three feet above the patient, depending upon the resistance of the tissues to the entrance of the fluid. During the injection the needle is moved about in the arc of three-fourths of a circle and gentle massage of the parts is carried on to promote absorption, and if the injection is made slowly—no faster than it is absorbed, there will be no soreness following it. After the injection the needle wound is sealed with collodion.

If no marked result is obtained from hypodermoclysis within twenty-four hours, or if exceptionally prompt action is desired, I resort to intravenous infusions through the median basilic vein. I have found that one or two intravenous infusions of from 500 to 750 cc. have brought about a reaction so that hypodermoclysis was sufficient thereafter. My experience has been that after intravenous infusions of the above amounts a crisis is reached within a few minutes to one-half hour. The patient always experiences a violent chill with strong, rapid pulse which becomes weaker towards the end of the chill. The breathing is short and rapid, the patient complains of dyspnoea and all the symptoms are those of collapse. The temperature however, rises rapidly until the patient begins to sweat and then makes a sudden drop. I had one patient in which the temperature rose from 103.4 to 107.5 F. and then dropped to 99 F.

My experience with saline infusion has been such that I firmly believe that in it we have an effectual method of treatment for all of the ordinary cases of septicaemia arising during the puerperal period. I do not know what its effects would be in the form described as acutest septicaemia, but I believe that its immediate use would be beneficial.

The treatment of puerperal infection after the inflammation has passed beyond the endometrium opens up a wide field of operations concerning the efficacy of which there is a great deal of dispute.

If at the primary examination of the uterine cavity a pus tube or pelvic abscess is found the question at once arises whether or not an exploratory laparotomy should be made. I believe that it should not unless intra-abdominal rupture with septic peritonitis has taken place, because the operative treatment for these conditions can be carried out with greater safety after the puerperium. If the pregnancy has been complicated with a fibroid or ovarian tumor and these become infected, hysterectomy or ovariotomy are imperative. Hysterectomy, either abdominal or vaginal, is not warranted for a simple putrid endometritis with septicaemia, but when a septic peritonitis arises from it or from any of the above conditions something more than constitutional treatment has to be resorted to. The question of the character of the operation is a difficult one to decide. I believe that the treatment adopted should be conservative and the earlier a diagnosis of septic peritonitis is made the more conservative the treatment can be. If the diagnosis is made early, a cul-de-sac operation will give excellent results. If the peritonitis has extended beyond the pelvic peritoneum general irrigation of the peritoneal cavity with normal salt solution should be considered. In this connection I wish to mention a case of septic peritonitis, reported by Burtenshaw (Jour. A. M. A., April 11, 1903). Septic peritonitis had followed an abortion and bacteriological examination of the blood and uterine lochia showed a streptococcic infection. Her first treatment was thorough cleansing of the uterine cavity, together with constitutional treatment and saline infusions of hypodermoclysis, enteroclysis and venesection with intravenous transfusion of normal saline solution. There was some improvement under this treatment but it was not permanent. Evidences of septic peritonitis were very marked, the functional activity of the kidneys was slight and the patient was rapidly passing into a state of coma. He contemplated a cul-de-sac operation but the "grave condition of the patient, especially the almost complete cessation of kidney function, appeared to preclude all hope of success attending the procedure." In place of this he decided upon abdominal irrigation. A two-inch incision was

made in the abdominal wall midway between the umbilicus and the pubis and through this an irrigating tube was inserted as far as possible into the pelvis. A normal saline solution, after the formula of Locke, was permitted to flow uninterruptedly into the abdomen for one hour, the patient being turned upon her side and abdomen in order to facilitate the exit of the fluid. The fluid returned was at first of a yellowish tinge and contained flakes of lymph but later it came away perfectly clear. The increased activity of the kidneys was immediate and twenty minutes after the irrigation was begun ten ounces of urine of a specific gravity of 1024 were drawn from the bladder. Forty ounces, the last being of a specific gravity of 1013, were withdrawn within the hour. During the next thirty-six hours the irrigation was repeated six times, after which the wound was closed. The total amount of urine passed in forty-eight hours was two hundred and fifty ounces. The improvement in the general condition of the patient was continuous, the temperature falling two degrees after the first irrigation and it did not rise above this point at any time after the treatment was begun. The patient recovered with none of the usual sequelae of peritonitis.

During the course of a puerperal septicaemia great care should be taken to immediately recognize the occurrence of secondary foci of infection. The constitutional symptoms will show that something is wrong and effort should be made to locate the trouble. If there is a phlebitis of the veins in the pelvis or lower limb, the usual treatment of rest and elevation should be at once substituted. I have found the liberal use of antiphlogistine or similar preparations a valuable aid in the treatment. If the location of the thrombosed vein can be made out, removal of the vein is indicated. If there is a septic arthritis, arthrotomy should be made as soon as the symptoms present themselves. If there is a periostitis, osteomyelitis or cellulitis, the earlier the foci of infection are laid open the better. I have had but one case of hepatitis in the course of a septicaemia and I treated it by incision as soon as pus was diagnosed by aspiration. In every case of septicemia, especially puerperal, the patient's friends should be informed of the possibility of a septic endocarditis, with its dangers.

This leads me to speak of another point, namely, the importance of an honest statement of the diagnosis to the family. I have known of a prominent physician whose patient, according to his diagnosis, had la grippe for one or two weeks after labor; following this she had rheumatic fever for two weeks, but she died so suddenly that he did not have time to make a new diagnosis. Such deception is by no means uncommon and while it is usually impossible for the physician

to deceive the patient's friends throughout the run of a bad case of infection, yet in the milder cases it is a common practice to attribute the trouble to some other cause. Every case of puerperal infection should be used as an example to impress the laity with the importance of surgical cleanliness and of the care and skill which is necessary on the part of both physician and nurse to secure it.

In conclusion I wish to mention a few internal remedies which I have found of service.

Veratrum viride, given in physiological doses, is a valuable remedy in the beginning of an infection and at times during the course of a septicaemia when secondary infection occurs.

Bromine, gtts. 5, in four ounces of water, of which a teaspoonful is given every two hours, has seemed to have a good effect in combatting the infection.

Arsenicum 6x and Chin. sulph. 2x will be indicated in most cases of septicaemia.

The most important point in the choosing of the remedy is a consideration of the constitutional condition of the patient which existed before the patient developed a septicaemia. It is a well known fact, and one that is used by some against the theories of the etiology of puerperal infection, that of two patients, exposed to the same dangers of infection, the one may develop a severe infection while the other will escape. The one had the power to overcome the invading organisms while the other had not. The cause of this failure should be determined, if possible, in every case and the remedy chosen upon this basis. In one case it may be faulty assimilation and poor nutrition, in another it may be faulty elimination. These points should be the foundation of the medicinal treatment.

AMERICAN MOTHER

D. A. FOOTE, M. D.
OMAHA

When Christ came He uttered such truths which helped sweep away the degradation of woman and the dishonorable and selfish thoughts of men and elevated man to a better and more sacred understanding of woman, and gave to woman a better knowledge of love, marriage and motherhood, especially the average American mother.

In every drama, poem and song of true motherhood is the high ideal standard of a sacredness as depicted by the motherhood of Mary who is in Heaven.

The power of wealth, fashion, pride, ignorance and idleness has caused many times this age of true love and motherhood to be inferior to the ideal.

I am standing today near what to me is sacred ground and ask you to visit Plymouth and witness in your mind the landing of the Mayflower and study the high ideal for home and liberty of these depressed people, who by a power of endurance and superior faith turned common ground into blossoms, that they might be for the hour nearer God. Here where they could study and live true to nature in all of its bearing and beauty and hear the solemn music of the Universe. Here is where American motherhood learned to know that the child needed the mother with pure Christ-like teachings that would cause it to rise above common surroundings that they might solve the hidden mystery of the sun and soil and thus create a civilization that could demand a permanency in law and reason. Here, where the forests have felt the keen-edge of the pioneer's ax and heard the prayers of anxious and true motherhood, and saw the trail of the Indians slowly enlarged into broad avenues, along which great multitudes traverse towards those moral heights that are accessible to all, and as we ascend those heights we suddenly come to where Bunker Hill seems transfigured into a truer civilization and the air seems redolent with friendship and the breezes seem to murmur the words, "We are brethren."

Here is where I ask you to study the true worth of motherhood and look upon these mothers who were country bred and country fed, industrious, honest, neatly clad, Bible readers as they were, and contrast them with some of the city bred, daintily fed, wasp-waisted, idle and trashy novel readers of some of the city women and girls of today who cast a slur at the slower process of nature because they expect,

through the power of wealth to suddenly leap into learning or wisdom or a home, only to find that they fail to grasp the full meaning of the Creator and this ruins their career of sweet motherhood in advance and suffers the penalty of a broken principle of God's plans.

It is then the young woman realizes that the only addition the world needs is the addition of goodness, and that society does not need greater volume, but greater purity. Little is taught from the primary grade to the university of a knowledge of their own being and evident destiny in such a way that will prepare the young American girl, for the sacred duties of motherhood. Natural child instinct is many times at a low ebb and the young mother trusts her babe to a nurse or a servant's care, who knows nothing of a mother's love. The child learns to know and act more like the nurse than the mother, and when it grows older, it feels the lack of a mother's love, and home has lost to a great extent its attraction and by the great law of heredity that kind of feeling will go coursing down the stream of life for three or four generations. At this age is when the child needs some being, in whom taking refuge, they can feel the presence of an everlasting harmony. That being should be mother; a mother who can reach into their little minds and teach their wings how to open and how to fly; their feet to walk, and that brings manhood and womanhood to the consciousness of being born again.

The women are the stronger of the two sexes, not in her physical strength alone, but in her instinctive, moral and mental qualities, hence you educate the girls aright, then the boys will come into line all right. There is no young man living that some girl can not influence either for good or for evil, depending upon the quality of the culture she has received. If for good, then the echoes will come back to her heart and make her better than man; if for evil, the echoes will come back to her heart and make her worse than man can be. When Adam fell, woman fell lower than man, but when Christ came He elevated her man's equal. I think above him.

God bless the good young woman, especially bless her if she comes teaching the young man so to live that they will be able to give of that which he asks to receive, the same quantity and quality of honesty, truthfulness, sobriety, industry and purity, then she will stand above man and he will look up to her as the leader of his social life. But if she goes along and accepts him with habits formed, with his physical nature saturated with tobacco, liquors, cocaine, cigarettes, etc., then he will look upon her as one seeking her level, and he loses that thought, that the greatness of woman flows out of the quality of her heart and not out of the quantity of her learning.

As I stand here and consider the pioneer mother's struggles and my own dear country home life, it seems to me that the good old mothers who lived true to nature and reared their families in the cabin and lent their might to clearing our land, are better than life; more beautiful than life, and their every faltering footstep and trembling voice is cheering to the heart, and if they did not magnify by a hundred diameters the virtues of the age, these virtues would be invisible and unknown now.

Motherhood is divine when it is the result of pure love, for love and admiration are near relatives of worship and possess in a humble form the virtues of their superiors.

When education teaches manhood and womanhood to study marriage and learn to know that love is the divine link that unites two hearts as one; then this intuitive knowledge will instinctively hand back and forth from husband and wife a feeling that they always want to be together. Then every true word and kiss will be an attempt to render permanent some thought divine. Then marriage will not be a failure, and their children will be born because they were wanted. Such children will be little buds of love that will have full permission from nature to unfold their beauty and kiss their life from parents whose teaching will cause their physical, their moral and spiritual natures to blend in perfect harmony, the same as childhood blends into manhood and womanhood. Such women do not need a creed to worship by. Her religion understands God by understanding some of its duties.

Looking at the good American mothers' religious lives, I can see that the Master contemplated, not only a Heaven, but a womanhood worthy of a heaven and their early Christian teaching I believe to have developed this beauty and character, and when they go faltering towards the brink of the grave, we can read in their souls that they had many lights of love that were lighted and guarded by a hand unseen.

These are the mothers who can form attachments, that can pity, love and express emotions and touch their children's lives through some intellectual and spiritual gate.

Now contrast this mother with the new woman mother. Both are American mothers. The new woman comes to double the quantity of full and equal citizens and not to improve the quality of society, she comes imitating that masculine factor that has long been here, she smokes tobacco and cigarettes, drinks wine and plays games for money; then she will ask us to believe that two smokers, two drunkards, two gamblers are better than one, the "touch of infinite calm

and peace of soul" seldom comes to her. She has lost much of that tenderness of heart and mother's love we described above. Her faithfulness is a burned up star and its glory has long since faded. We physicians have sometimes in our professional life shuddered to see a new life spring into light from such a mother. With her degraded thought she thinks she can draw near the liberty of man by imitating his vices. The words "Moral Failure" are written over her brow and society never seeks in her a reformer.

All the children born into this world are constantly coming in life's pathway where two ways meet. Grace says take the right hand way; nature says take the left hand way. Ninety per cent of such children take the left hand way because their early lives were a mistake. These new-woman mothers will fail to make an entry in their hearts of the first laugh or first plainly formed words of these neglected little ones. Of eighty-five per cent of these children, no one knows but themselves what troubles are buried in the innermost recesses of their souls, as their clouds of ignorance and passion will hide the sunbeams which should always shine from heart to heart. Some one has said:

"We are not always glad when we smile;
For the heart is a tempest of pain.
Many live in the guise of a laugh in the eyes,
As the rainbow lives in the rain."

Not very long ago, as I was standing in a hall of our Infirmary, I saw a little germ of life crawling towards me. It was ragged, dirty and barefooted in consequence of its nurse, who never knew a mother's love. It was worrying, not crying, but worrying just as though the weight of the whole world was upon its shoulders. It came nearer and when within a few feet of me it raised itself upon its little knees and with outstretched hands and childish pleadings asked to be taken. My whole better nature was aroused. I took it up and played with it and fondled it, gave it that which its little nature was craving so hard for—sympathy—and it showed by its bright blue eyes that its soul was fed by a ray of sunshine, and I was so happy being able to give it, that I felt like repeating:

"Oh, loving, gracious Father,
Bless this dear babe, I pray,
And with thy people gather
This child at that great day."

I knew that its father had forsaken it early in life, and the first words it heard from its mother was, "O, you little devil," and she, too, had forsaken it long before it could walk. It has no mother's love, no mother's care, no mother that allows it to nestle close to her breast

with affection, no mother to look up to with smiles of joy and say, "Rock me to sleep, mother, rock me to sleep." No mother that puts it in its warm bed, tucks the covers around it and seals its bright sleepy eyes with an affectionate kiss, but instead, it is put onto a little pallet on the floor at the foot of its nurse's bed and made to go to sleep. It has no mother that is awakened by an instinctive, magnetic influence from her child, telling her that her child is naked and cold. Its mother left it on this ocean of life without its bark. No mother as a compass to guide it in the dark; no mother to point it to that bright star more than eighteen centuries old; no mother's strong anchor more precious than gold.

It it any wonder that that little soul feels the weight of its birth upon its shoulders so early? What do you think its song will be as it grows older? Will it be, "How dear to my heart are the scenes of my childhood?" or will it be, "Nobody knows the trouble I see, nobody knows but Jesus?"

Through the experience of the trials of this life, doctor, I ask you to teach every mother in your circle of acquaintance to so live that she can call her new born child "a little Lamb of God," if you can not do more, do as faithful Aaron did, "hold up the prophet's hands."

DISCUSSION

L. K. MAXWELL, M. D.: Dr. Foote is either a very slow thinker or a very slow writer, because he did not furnish me with a copy of his paper, and because of this I am compelled to address you upon his paper with no preparation. I most heartily commend all that the doctor has said in his discussion of this subject. The first thought that came to my mind as he read the paper was, Do we practice what we preach? I do not know the size of the Doctor's family—I do know my own, but I am not going to give that away unless Dr. Humphrey, who is from the same town, does. In canvassing the physicians of our own town I have learned that we have not enough children to go around—I did not have time to canvass the regulars—but fortunately for the town we have some very prolific families. I can cite numerous instances of twins, a few cases of triplets, and a year ago one set of quadruplets. It shows that some of those who live in the Polish settlement are making amends for what the fraternity have omitted. The prevalence of abortion is not due entirely to the American mother. I think it is due just as largely to the American father, and him who should be an American father. In fully fifty per cent of the cases in which I have been solicited to do abortion I have been solicited by the husband, or by the lover, or by the expectant mother who has come at the earnest solicitation of the husband, and he also comes and demands the work shall be performed. I feel that the feminine portion of humanity is not any more at fault, if as much in this instance, as the male portion. I realize that a law, such as the Doctor

mentions, would be exceedingly valuable as a preventive of this class of trouble, but I fear that if the matter was agitated by the profession among those who furnish the votes that place those in position who make the laws, we would fall far short of having enough votes to enact any legislation of that kind.

I believe that the American people yet possess enough and a very large percentage of that same class of mothers that we had in years gone by, who produced the offspring whose names have filled the halls of fame. That class of individuals has largely come originally from the lower walks of life, and we have many among that class who have the same good old-fashioned families and producing stock which is bound to have its effect in the future. Personally I have the highest regard for womankind and believe, as I stated before, that in a heavy per cent, if not the major portion of these cases, the acts are instigated by the male parent of the expected offspring.

MILLIE J. CHAPMAN, M. D.: I was very glad to hear this paper, and, like the rest of you, deplore the undesirable condition that was reported. But I thought what a good thing it is that we met together from the west and from the east, from the north and from the south. From Dr. Foote's paper I should take it for granted that there are very few families in his parish. I have been situated differently, and I did not know there was any lack of children. From the number of poor little children we have to look after, both in the homes and in the hospital and children's homes, I thought there was a lot of children. And from the young girls who are interested in working for other people, who as soon as they get out of school life take up the work for poor people and look after the children, I thought nearly all young girls were learning to be mothers before they were mothers. And with the influences that have been about me I began to think that women and girls had forgotten this evil way of living that has been reported to us from the west. Now I see we only need a little broader life, and a mingling and meeting together to learn that we still need work in this line. I was very glad to hear from Dr. Maxwell that he thought the wrong was not wholly to be placed with the mother. I am very sorry for every wrong-doing mother, and for every woman who is an unwilling mother. I am sorry that any woman comes to the place where she is a mother and is not glad to do for and care for her child. But I am more sorry for the one who is a mother and whose child and herself are infected from the unholy living of the father before her marriage. And when I see the bright, pretty girl that I have taken care of from birth up and then she has married some man where it was supposed to be a good union, and her blood is poisoned from the time of her marriage, I am sorry indeed, and I am beginning to feel that if some women do not want more babies and more children in their families, when such conditions exist the blame is not wholly to be placed on the mother and the girl. I feel that this is, as physicians, a proper topic to bring up and discuss. But I do want you to understand that there are a host of girls and women who are right-doing, who have holy living themselves, desire children and care for them when such blessings come to them.

D. A. Foote, M. D.: I do not know as I have anything to say in closing except to state that the record I consulted as to the gradual decrease in the American family was the census report at Washington. I would add that the northeastern states have the worst record in this country. New England has the worst, according to these figures. It shows that education leads people away from the establishment of families and homes. I said nothing in my paper which would in any way relieve the husband from his share in this crime. I regret that no one discussed the concluding paragraph of my paper relative to the cure of this terrible number of abortions being performed, requiring the physician to report to the health board of his city all such cases, their cause, and all the points that should be known to the proper officers of the law and the state. Make these reports public and thus by publicity retard the crime. I am sorry because I wanted to stir up some discussion along this line.

CAUSES, SYMPTOMS AND TREATMENT OF ABORTION

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PHILADELPHIA

We look upon abortion as one of the growing evils of civilization. Rarely can we find a woman who has borne a number of full-termed children who has not had one or more miscarriages. We meet them in the high and the low, in the educated and the ignorant, in the strong and the weak, and the causes are as various as the cases are numerous.

Yet, considering the vast number of cases that annually occur, how surprising it is that there are so few deaths, and many of these deaths, I am sure, are attributable to the unskilful management of the professional attendants. Take the inferior animals, the cow or the sheep, as an example, we find that miscarriages are common and numerous, and the results are unattended by serious complications. Sheep abort chiefly through fright, especially when attacked by dogs. They don't seem to suffer through it any physical disturbance, any more than they do through a passage from the bowels; they abort and then go about as though nothing had happened. The superior intelligence of the human family has invented destructive mechanical means for producing abortion, and more fatal appliances for managing the case after this occurrence.

In proportion to the abortion being caused through abnormal physical functions or external mechanical means, we find the mortality increasing from an extreme minimum in the former to an unlimited maximum in the latter.

We rarely have any of the serious complications, such as cellulitis, metritis, peritonitis or other pelvic lesions, following abortion caused by weakened or diseased natural functions, but on the other hand, when caused through mechanical appliances and by unskilful hands, we are constantly called upon to treat many different serious pelvic affections.

It is an important consideration in the treatment that a proper understanding of the cause is appreciated. As the cause varies so will the treatment, and in each case the cause must be ascertained.

The cause may be a reflex influence from some suddenly disturbed function on a neighboring organ, or to a contagious disease, or some disease of the uterine walls, or a disease of the placenta or embryo, or to some mechanical violence locally directed for criminal intent, or through the action of medicines purposely taken, or from too frequent coition, which is a common cause during gestation.

In some cases the controlling cause of the abortion is exceedingly slight, while in others the influences cause a serious disturbance of the harmony of the functions of the entire body before expulsion is produced.

A misstep causing a slight jar will bring on uterine contraction in some cases, while a fall down an entire flight of stairs will produce little or no disturbance in others.

The influence which certain diseases, consumption, heart complications, scrofula, cancer, syphilis or other constitutional blood and eruptive affections, may exert in causing abortion is certainly great, yet many cases suffering from one or more of these diseases go on having full termed children one after another without positive interference from their bodily dyscrasia.

Some of our most prolific women are those suffering from consumption.

It is certain, however, that all constitutional diseases, although they may not exert a disturbing power to the extent of expulsion, exercise a constant, expulsive influence upon the uterus during gestation and stamp an imprint of their character unto the innermost ramifications of the physical forces of the foetus.

The appropriate treatment of the diseases of the mother during pregnancy will accomplish much in restoring to the full measure of vigor the enervated forces and deprived growth of her offspring.

The constitutional disease of the father is no less active in planting the seed of its kind into the embryo and warning against the quiet domicile of its intrauterine life, than is the disease of the mother.

A tumor situated in a neighboring organ may, by its mechanical action upon the uterus, bring on uterine contractions and foetal expulsion, but those cases have a minimum association of danger, if the tumor is non-malignant.

The curative effect of medicinal treatment of these tumors will depend upon their nature.

Tumors situated in the uterine walls, as a rule, forbid conception, but when conception is accomplished, expulsion, attended with grave symptoms of hemorrhage, is quite certain to follow at an early period.

Subinvolution of the uterus takes first rank among the spontaneous causes of abortion.

This condition of the uterus, so commonly present in women in the lower walks of life, accounts in a great measure for the many cases of miscarriage occurring from spontaneous causes among them.

Primiparae enjoy the certain privilege of going to the full term of gestation, but in subsequent pregnancies their just claims upon

nature for a repetition of their first enjoyment are often denied to them. The coast of her reproductive life is now beset with the formidable and dangerous shoals of subinvolution, endo-metritis, ulcerations, lacerations, displacements and inflammations of surrounding pelvic organs.

Many of the abnormal conditions of the uterus and appendages which are established during the reproductive period and acting as obstructions to the harmonious completion of gestation are now through the advanced state of gynaecological art being overcome, and an unthwarted gestation assured.

Other causes of absorption may be found in the diseases to which the foetus is frequently subjected.

Dr. B. F. Lyle recently exhibited before the Academy of Medicine of Cincinnati a five-months-old foetus presenting a marked smallpox eruption. The mother had smallpox and miscarriage took place on the third day of her eruption.

It is no uncommon occurrence to find a miscarried foetus exhibiting well marked signs of hydrocephalus or hydrothorax or ascites, which particular condition is the outgrowth of morbific causes spontaneously developed in the foetus and in no way associated with any disease of the mother acting as a cause.

If the life of the foetus is destroyed by the disease of which it is suffering, expulsion occurs soon after. The progress of the disease may be so rapid as to terminate the life of the foetus at an early period of its existence, or if delayed and life is spared the child is born at full term exhibiting signs of its disease to a greater or less degree.

The placenta is also liable to disease, which may directly cause abortion at any period of intra-uterine life, however, usually at the later part of term. A full appreciation of the nature and character of the various diseases of the placenta and the frequency with which they operate as causes of expulsion is hindered by the paucity of the observations made in this direction. Acting as the medium through which supply and drainage is maintained between mother and child, the delicacy of its construction and function and its high vascularity and the frailty of its uterine attachment, renders the equal functional poise of the placenta particularly liable to disturbance in many ways.

A fall, a strain or a direct blow against the surface of the abdomen may produce a rupture of one or more placental blood vessels, the hemorrhage from which, forming a clot between the walls of the placenta and uterus, will, through the disturbance of intercurrent circulation and detraction of foetal nourishment, bring on uterine contractions and expulsion.

Symptoms and Treatment—Hemorrhage and uterine contracting pains are the two prominent symptoms associated with abortion, the value of which as diagnostic signs increases as gestation advances.

In the earlier periods of gestation the presence of these symptoms may be mistaken for those attending the monthly turns, yet if closely scrutinized they will be found to differ from the symptoms, course and other monthly conditions usually present in the case under examination.

The hemorrhage will be found more profuse, clotted, dark and having a peculiar decayed-blood smell, and the pains will be more severe and extensive than when she is having her monthly turns, however much she may suffer from dysmenorrhoea.

When preceded by a decided chill those pains beginning in the back coming around the hips and passing down the groins have a peculiar value of importance in confirming a supposition that the uterus is making expulsive efforts upon some kind of a body, the exact nature of which cannot be clearly defined until a digital examination is instituted, the value and necessity of which in clearing up doubt cannot be too earnestly impressed and should be insisted upon in every case of supposed abortion.

The rate of the pulse and the degree of temperature assist us in making a correct diagnosis.

In dysmenorrhoea we rarely find any acceleration of the pulse or increase in the temperature, but in abortion we have both the pulse and the temperature increased.

Also in making an examination we find in abortion an increase of temperature in the vagina exceeding the temperature of the surface of the skin, which does not exist in any condition of menstruation.

The chill which invariably ushers in the primary symptoms of abortion has a strong diagnostic and prognostic value; diagnostic in determining the cause of the pains and hemorrhage, and prognostic in predicting the ultimate termination, which is expulsion. The chill indexes the fraction of the continuity of circulation between mother and foetus. Hemorrhage and pain unpreceded by a chill are frequently associated, sometimes to an excessive degree during the course of gestation without producing expulsion, but when we have those symptoms preceded by a chill, we may be certain to have expulsion follow.

An escape of amniotic fluid accompanied by hemorrhage and uterine pains are sure indications that rupture of the sac has occurred and that a severance of membranous attachment has been instituted.

In the earlier periods of gestation an escape of amniotic fluid is ominous of danger and may be set down as a sure sign that expulsive

pains will shortly follow, unlike what frequently occurs in the later periods, sixth or eighth month, namely, an escape of large quantity of clear, sometimes slightly viscid fluid, bearing a strong resemblance in color and smell to amniotic fluid, without disturbing gestation, which continues onto the full period in a normal manner.

In the earlier period the escaping fluid is certain to be amniotic, while in the later period a doubt may prevail that the fluid is not amniotic, or should it be amniotic the sac in which it was contained was an independent outgrowth from the external surface of the placenta which membrane is not ruptured or its functions impaired by the escape of the fluid contained in the ruptured sac.

The first thought that presents itself to the mind of a young physician when called upon to attend a case of miscarriage in the early period of gestation is how shall I treat the secundines. Ignorance on the part of the physician of the proper knowledge of how to skilfully manage the placenta or membranes has been accessory to the death of many women.

After the ovum has escaped and such of the membranes removed that may be presenting, let the patient alone without meddlesome interference for a day or two or longer until the remaining membranes are found presenting at the lower os, and then by means of the index finger remove them gently and skilfully.

But the practice of making frequent examinations and pushing and gouging at the uterus is highly reprehensible and dangerous to the patient.

Although immediate interference may be demanded, in no case, however, should force be used. Never give up the index finger for the blind use of the curette.

The dull curette is a valuable instrument when used under the guidance of the index finger to remove detached and partly separated secundines, and should never be used with force or pressure. By the direction of the index finger the dull curette, bent at the fenestrated end, is placed behind the presenting membranes to draw them towards the os externum.

There is very little hemorrhage until the ovum has entered the canal of the cervix, and having dilated the internal os is pressing against the external os for exit.

The proper course is to remove the ovum and so much of the membranes that are loosely presenting, and allow the remaining attached portions to remain for a day or two until the natural contracting efforts of the uterus have separated them.

The use of the tampon in the vagina as a haemostatic measure is worse than useless and suggests the inventive measures of primitive intellects.

Its presence in the vagina is the focus around which septic matters are generated and nourished and readily gain entrance to the circulation through the high temperatured walls of the vagina and uterus. The pressure of a tampon in the vagina is incentive to greater hemorrhage and increased temperature of the vagina. I have observed that even a large and indurated clot of blood lodged in the vagina has acted as a promoter of hemorrhage and local elevation of temperature, the removal of which would immediately stop the hemorrhage and lower the vaginal temperature.

It is unnecessary to raise the foot of the bed or place the head of the patient below the level of her hips to check flooding. Such procedure is only the practice of inexperienced physicians.

The flooding would continue with equal force if the woman was turned upside down.

The patient should be kept under all circumstances on the side or back in a horizontal position with the head raised to a comfortable level. This position may be continued for several days after all danger from hemorrhage has passed.

Let the diet consist of toast, tea, crackers, gruel, a small quantity of beef tea, a large quantity of pure cold water, and avoid stimulants entirely.

Keep the room at an even, agreeable temperature, 68 if possible, with proper ventilation, and interdict loquacious company.

The best remedy in the materia medica to control uterine hemorrhage is ipecac.

I speak of the efficacy of this remedy particularly when the flow has reached that point known as flooding.

Never swap aconite for any other remedy when your patient has a rapid pulse, an intense temperature and a passive flow.

In passive hemorrhages give belladonna, china, hamamelis and erigeron, or arnica, according to the indicated conditions.

Maintain cleanliness of the external parts by the liberal use of hot salt water.

When necessary irrigate the vagina with normal salt solution by means of a fountain syringe and a rubber bed-pan.

CONVULSIONS DURING AND AFTER LABOR

EDWARD BEECHER HOOKER, M. D.
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There is no complication of labor more to be dreaded than true puerperal convulsions, for the lives of both mother and child are threatened and both will be lost unless relief be afforded.

In some cases there are premonitory symptoms, which give warning to the most negligent. These are headache, disturbance of vision and epigastric pain. There are others also, but not of the same importance, such as nausea, vomiting, restlessness, weariness and mental irritability. But the most dangerous form, whose onset is sudden, and which rapidly causes coma and death, may come unheralded by any of these warning signs. Grave is the responsibility of the accoucher when in the midst of an apparently normal labor, or after its completion, his patient suddenly becomes unconscious, her eyes fixed in a vacant stare, and in a moment her frame shaken by convulsive movements, to be followed soon by irregular heart action, cyanosis of the face and stertorous breathing. Heavier yet is his responsibility if he has neglected to systematically analyze her urine and thus keep track of the excretion of waste products, whose retention in the system causes the frightful phenomena he is witnessing. For it is to detect in advance the otherwise unheralded coming of puerperal convulsions that we make analyses of the urine of the pregnant woman. And it is not enough to note the specific gravity, test for albumin and look for casts. The quantity of urine passed in twenty-four hours and the amount of urea, or at the very least the amount of the total solids excreted, should be known. It is not easy to prepare the hydrobromate of soda solution to test for urea, and it is difficult to keep it fresh, nevertheless it is safer to be sure of the urea. It is, however, very easy to estimate the total solids in twenty-four hours. And if the amount of urine excreted is normal, contains no albumin, if its specific gravity is high enough, and the total solids are not diminished, you may feel reasonably safe.

I have been surprised to note how few physicians who come before our examining board for license to practice have an accurate knowledge of the simple method of ascertaining the total solids by the use of the co-efficient of Haser, and at the risk of imparting elementary knowledge I will repeat it. Multiply the last two figures of the specific gravity of the urine by 2 1-3. This gives the number of grammes of

solids in 1000 cubic centimeters of urine. Multiply the product already obtained by the amount of urine passed in twenty-four hours and divide the total by 1000 and you have the total grammes of solids. One gramme is equal to about 15½ grains, and the total solids are easily estimated in grains. An ounce of urine is equal to 30 cc., and it is easy to reduce the quantity in twenty-four hours to cubic centimeters. To illustrate, a woman of average weight is passing forty ounces, or 1200 cc. of urine, in twenty-four hours, with specific gravity of 1021. The simple problem is then

$$\frac{21\text{-}3 \times 21 \times 1200}{1000} = 57.6 \text{ grammes} = 892.8 \text{ grains.}$$

The normal amount of solids for a person weighing 145 pounds is about 60 grammes or 930 grains, so this woman, for her size, is getting rid of her waste products very well and is in no danger.

The amount of urea excreted by a healthy adult should be about 33 grammes or 512 grains, that is a little more than half of the total solids, so that the urea could not be seriously diminished without very perceptibly diminishing the total solids. Therefore, as I said, if we find the urine normal in amount, of good specific gravity, without albumin, and no decrease in the total solids, we may consider that the kidneys are doing their duty and that there is no danger of puerperal convulsions so long as this condition prevails.

Puerperal eclampsia is caused by a toxaemia, "a poisoning of the blood by certain unknown toxins which are retained in the system by reason of deficient action of the excretory organs, notably the kidneys, the alimentary tract and the skin; these toxins, floating in the blood, augment the heightened instability of the nervous system, raise the bodily tension and by irritating the motor centers of the brain produce convulsions, coma and frequently death."

Convulsions may be prevented, when danger of their coming is detected in advance by putting the woman on a milk diet, keeping the bowels in good order and stimulating the skin by warm baths. Should convulsions occur in spite of foreknowledge and preventive measures, or should they appear unexpectedly, an early delivery should be brought about under chloroform, the rapidity of the procedure depending upon the urgency of the situation. In sthenic cases, with high arterial tension, the tincture of veratrum viride is the most valuable remedy we possess and it should be given in doses of five to fifteen drops until the pulse is reduced to 70. In the asthenic cases, with weak heart, fluttering pulse, cold skin and arrest of urinary excretion the subcutaneous injection of the normal salt solution and high enemas

of the same are the most effective means, sustaining the failing heart and restoring the action of the kidneys. A solution of chloride of sodium and acetate of sodium, one dram of each to the pint of hot sterilized water, is even a better preparation than the plain salt solution. Thyroid extract has been advocated within the past two years as a remedy for the prevention of eclampsia and its treatment when present. During the past year Stroganoff has reported a remarkable series of cases without a death. He regards eclampsia as "an acute infectious disease which runs a self limited course of a few hours' duration, seldom exceeding 24 hours in length and still more rarely 48 hours." His treatment is designed to accomplish the following results: (1) The prevention of convulsions by lessening the irritability of the nervous system and by removing all external sources of irritation, especially those connected with the birth canal. (2) The strengthening of the vital processes by careful supervision of the cardiac and pulmonary circulation and by securing as large a quantity of oxygen as possible." If, with these measures and a proper diet, the convulsions do not cease he administers oxygen during the convulsions, morphine and chloral to control the seizures, cardiac stimulants if the heart is weak, avoids all depressing measures and delivers as promptly as possible.

I have alluded to genuine puerperal convulsions thus briefly in order to emphasize a few points concerning them, and also to distinguish them from convulsions which I have encountered during and after labor which do not seem to me to be true puerperal convulsions, which are not caused by defective excretion of waste products, but are more purely epileptic or neurotic in their origin. There is beyond a question a peculiar susceptibility of the cortical motor cells to irritation during pregnancy and therefore a weaker stimulus will evoke convulsions than during the non-pregnant condition, and I maintain that convulsions may occur differing from true eclampsia and yielding to different treatment. It is important to discriminate between these two classes of seizures, the one is a toxaemia, the other a neurosis. The recital of a couple of cases of the latter kind will illustrate my meaning.

The first case of this kind that I met occurred in 1893. A rather delicate neurotic woman of twenty-five years became pregnant in the previous December, about ten weeks after her marriage. She was confined September 11th. The last analysis of urine before confinement showed normal quantity in twenty-four hours, S. G. 1026 and no albumin. Labor was normal, and she came through it in good condition. At 4:30 the following morning she was suddenly seized

with convulsions, which lasted several minutes, with entire loss of consciousness. During the day she had occasional spasmodic twitchings of various muscles, but no return of the convulsions. The urine excreted amounted to about two quarts, 1018, no albumin, no casts, excessive amount of phosphates. I learned that when a girl she had been troubled with epileptiform attacks, without loss of consciousness (petit mal) during the menstrual epochs. Taking into consideration the brevity of this attack, the unclouded mental condition after it, the normal action of the kidneys, and the previous history, I made up my mind that this was an epileptic seizure and not puerperal eclampsia. The subsequent history confirmed this diagnosis, for she had several attacks afterwards, and when menstruation was resumed she had a seizure at each epoch for two or three months.

This experience taught me that convulsions in the puerperal state are not necessarily puerperal convulsions.

A second case illustrates the same proposition, though less clearly for there was some kidney insufficiency at the same time. This patient, a primipara, like the other, was passing urine in normal quantities, free from albumin, but of specific gravity a little lower than normal, 1013 at the last examination before confinement. Labor came on about ten days late and the breech presented. I explained the situation to her at the proper time, and let her know that I should probably have to use forceps to deliver the head. I prepared the instruments for the emergency in another room and assured her of a successful termination of labor. But she was very nervous, and suddenly, while the breech was dilating the perineum, she became unconscious, rigid, and then convulsed. I immediately had chloroform administered, delivered the breech and body with my hands as rapidly as possible, and putting the forceps on the head, speedily completed delivery without injury to mother or child. The patient quickly became conscious and never had another sign of convulsions. Urine drawn by catheter was S. G. 1021, and contained small quantity of albumin, which, however, disappeared in a few days.

I admit that this is not a clear case of epileptic or non-eclampsic convulsions, yet from their short duration, the rapid and entire recovery, and the absence of other symptoms usually accompanying eclampsia, I am inclined to believe that the neurotic element predominated rather than the toxic, and that if the woman had had the common vertex presentation, and labor had gone on without unusual incident, no convulsions would have occurred. Four years afterward I delivered her again: she had normal labor, vertex presentation, and no con-

vulsions. But her urine, while free from albumin, stayed at 1012 and 1014 during the last few months of her pregnancy.

The importance of discriminating between the toxic and neurotic forms of convulsions is evident. When the system is overwhelmed by a poison our true homeopathic remedies are of little avail, for the system is not in a condition to react to them. If we confine our efforts solely to prescribing the most similar remedy—valuable as it certainly is in the right class of cases—we shall fail and lose valuable time besides. Our efforts must be directed to diluting the poison, sustaining the patient, controlling the convulsions by chloroform or other drug, restoring all the excreting functions to their fullest possible capacity and promptly delivering the patient. In the neurotic form the potentized remedy is within its true sphere and we may justly expect much from it. Delivery need not be so swiftly accomplished, although we can hardly expect the convulsions to wholly cease until labor is over and we should use every measure which will lessen the irritability of an overexcited nervous system. To bring this about we shall have to call upon old friends, whose faces are familiar to you and I need not therefore draw their pictures; they are Acon., Bell., Cicuta, Coffea, Cuprum, Gels., Hyos., Ignat., Nux V., Opium, Puls., Stram., Apis, Canth., Terebinth, and others. Do not use them all at once, but select the one your patient calls for and give it with confidence.

DISCUSSION

EMILY L. HILL, M. D.: I am sure we will all be benefited by the very practical and comprehensive paper of Dr. Hooker's, and while endorsing everything he says in regard to the necessity of watching the urinary secretion, I would like to voice a warning in regard to intestinal elimination. In the process of digestion and fermentation going on in the bowels a large number of toxins are formed and the high absorptive power of the intestinal mucosa admits of a considerable quantity of these toxins being absorbed and carried into the blood; especially if a high degree of constipation exists with consequent retention of waste material. Were it not for the liver, which stands guard over the blood stream that has been thus loaded with poisons, and before it enters the general circulation passes it through a purifying process converting the toxins into substances capable of being made use of in the organism or else throwing them back into the bowel with the bile in such form that they will be excreted with the stools, the body would soon be overwhelmed by its own products. When we consider that nearly every pregnant woman suffers from constipation to a greater or less degree it is easy to see how any failure on the part of the liver to perfectly perform its functions will allow these toxins to remain in the blood. Hence, while looking after the kidneys and

seeing that they are working properly, do not forget the importance of keeping the liver active and intestinal elimination in as normal a condition as possible.

F. W. HAMLIN, M. D.: I have enjoyed listening to this paper by Dr. Hooker very much. It is an eminently practical subject. I think we all concur with what the doctor has said in regard to the analysis of urine. That subject has been so thoroughly threshed out during the last fifteen years that no doctor who takes care of a woman during labor would go without examination of the urine. In the presence of albumen in any special amount, and especially if it has existed over the whole period of pregnancy, we have one of the most significant danger signals we possess, and I do not agree with the opinion that has recently been expressed that many of these cases come on out of a clear sky, but that you will find there has been albumen in the urine for some time before convulsions come on. I believe if examination of the urine is made some time before labor that albumen will be found.

As for treatment, I am very glad to hear the doctor say what he did about *veratrum viride*, and that in the form of Norwood's tincture I believe to be of exceeding great value. We use it continually in our work in New York at the Flower Hospital.. We hold the convulsions by *chloral*, but do not push it to any extent. Morphine is not pushed to any extent. The action of the toxins is overcome by hot saline injections, and the skin stimulated by the hot pack.

M. H. CLARKE, M. D.: I would like to say a word about the use of tea by the pregnant woman. I have been led to believe from observation that the large amount of tea often drank by the pregnant woman has a tendency to diminish the amount of urea. If that is stopped the amount of urea can often be increased without any medicine. I have often given *thea* as a homoeopathic preparation of tea. I think it is one of our best prescriptions. I have one case in mind. This woman at 6 months showed the normal amount of urea, but at the 8th month she was taken with convulsions, and in about 3 hours she was delivered. The convulsions continued all this time. Examination of the urine showed a large amount of albumen with diminished solids. That was about 4 o'clock in the morning. When I saw her then she was unconscious. I think the remedy prescribed, aside from the chloroform was aconite. At 9 a. m. I commenced to give her Carbo Veg. 2x. In a little while that woman went to sleep, and when she woke up was all right and asked for her husband. I was first led to give this in puerperal convulsions, but have since given it to children in convulsions following vaccination, and every one of these cases was cured by carbo veg. It was the indicated remedy. Thea did not seem to help, and the symptoms led me to give carbo veg. I believe thea is good for the remote effects of vaccination, but for the acute effects I believe carbo veg. is the best.

DR. HOOKER: I would like to ask Dr. Clark if the woman to whom he referred was in a condition of coma all the time?

DR. CLARK: No sir, she was under the influence of chloroform most of the time. We had to give her chloroform in order to keep her on the bed.

B. H. OGDEN, M. D.: There are to my mind a good many points to which I, as yet, put a question mark. In the first place, I am sure we do not yet know the cause of puerperal convulsions. It is not a uremia. It is a toxemia, but where the toxemia develops, whether it is from imperfect action of the kidneys, whether it is a poison developed in the placenta—what it is we do not know. It is manifested by a failure to eliminate the toxins, it may be, by the kidneys, bowels or skin.

In the treatment of this condition, one of the first indications I think is to increase elimination. We can help to do it with our homœopathic remedy, but we can also do it by various adjuvants. Give remedies that will increase the action of the skin, and promote sweating by the use of hot packs. We must give great attention to elimination by every known means, as well as to the homoeopathic remedy.

Another question coming before us prominently in this connection is, whether the uterus shall be emptied or not, and I still put a question mark to that point. It is my belief that we should empty the uterus. We should allow the child to become as much developed as we can, and if the woman can go on to term, or until the child is viable, why so much the better; but if the toxaemia is getting the better of you as shown by the urine it seems to be best to empty the uterus. I believe that this is not altogether a disease of the kidney. I should like to hear the opinion of others here.

As to the use of veratrum viride, I have had good success with it. Another useful procedure in severe cases of the sthenic type is bleeding. I had a case where the urine showed a large amount of albumen, and strange to say, not very much diminished urea, but very much diminished solids. I immediately began procedures for eliminating, but within 48 hours she had two convulsions, and I immediately emptied the uterus. She remained unconscious the next day with a temperature of 107. I thought the woman was dying and when the minister was called I told him she would probably die before the day was over, but she did not die. I drew off from the veins of the arm 1½ pints of blood, and then substituted for this a hypodermoclysis of normal saline, also put her in a cold pack, and this seemed to immediately bring about an improvement, and with twelve hours from that time she became conscious, and when I left her that day I had hopes of her recovery. It seems to me that in this case bleeding and the use of the normal saline was of direct benefit, also elimination through the skin and reduction of the temperature by the cold pack. Of course we need to be careful how we use this adjuvant, but I do think that it is occasionally of benefit. Bleeding dilutes the toxines and relieves the congestion. In this case the face was almost purple.

I generally use high enemas for elimination from the bowels. Sometimes calomel, which I think is one of the best. I use it in 1-10 grain to 1-4 grain tablets until the desired action is produced. I use it for the mechanical effect. It is not homeopathic or allopathic. It is

mechanical. This is followed by some saline laxative. When very rapid catharsis is required croton oil is particularly useful.

FLORENCE N. WARD, M. D.: I have been very much interested in Dr. Hooker's instructive paper, and I would like to speak of a certain symptom which I have noticed in puerperal convulsions, and that is loss of memory. I have observed this in many cases, loss of memory preceding the attack for some time. One case I had just before I came on here. A little woman reported at the clinic about eight months pregnant. On questioning her we found she had had cramps for 24 hours. We immediately sent her to the sanitarium, and I saw her in the evening, and she was delivered of her child at one o'clock in the morning. She then went on normally in every way, until 26 hours after she was delivered she was seized with eclampsia, and went on steadily with convulsions for about 24 hours, and then remained in coma for 24 hours. She then awakened and recognized her sister. We questioned her as to what she could remember and she could remember nothing that had occurred since early Tuesday afternoon when she was in the clinic, and she had been at the sanitarium, had been delivered, but could remember nothing of what transpired since she was in the clinic. She said the last thing she remembered was that she stepped off the steps at her home to go elsewhere. I think this is very interesting from a medico-legal standpoint.

Speaking about cathartics, I always used croton oil, putting it on the back part of the woman's tongue. In the above case the woman had been neglected, and we secured very free catharsis, which I doubt if we could have secured in any other way. We were obliged to use six drops of croton oil before we obtained any response.

I think one of the most critical points we have to decide in these cases, is, whether to empty the uterus or not. I think the best way is to try for elimination. If you can start catharsis and obtain improvement, well and good, let the uterus alone; but if from catharsis you get no results, then you must resort to mechanical aid.

Another point is, when to use veratrum viride. In the case referred to I think gelsemium came in very much better. In sthenic cases I think veratrum viride is better. When there is a very full pulse, I think glonoine is better.

DR. PRIOR: I just wish to state a case I had. It was a normal labor, and quite easy. In 20 minutes after the delivery of the child she had pain, and on removing the afterbirth, she had convulsions immediately, before I had time to remove the afterbirth entirely. She had convulsions all that night until the morning. I gave her gelsemium, belladonna, veratrum viride, and several other remedies, and not one of them did her any good whatever. I then gave her hyoscyamus, and she did not have any more convulsions at all, and as Dr. Ward has just mentioned, she knew nothing about it whatever. The hyoscyamus certainly cured the convulsions.

D. A. FOOTE, M. D.: Dr. Ward took the words out of my mouth by speaking of the use of croton oil. I usually dilute it with olive oil, and then add more croton oil if necessary.

This is a very interesting and important subject. It seems to me that when a patient is in convulsions you are wasting time to give the homeopathic remedies at once. I doubt if a patient is able to absorb remedies while she is in convulsions, so that the first thing to do, in my opinion, is to administer chloroform, then give croton oil, two or three drops on the back of the tongue, then put the patient in a hot pack and use the saline solution, either as an enemata or subcutaneously. I would then give veratrum viride, and I would give it in 15-drop doses, if necessary subcutaneously, as that is allowable. Then if the convulsions recur I think that is the time to use chloral. Now these are desperate cases, and they will get away from us unless these remedies are used. Then later you can use the indicated homeopathic remedy, but I do not think a small dose of any remedy will do it at first.

GEO. R. SOUTHWICK, M. D.: Unfortunately I came in late and have not heard what has been said, so if I repeat I crave pardon. I would like to call attention to one or two points that I think might be helpful. First, the use of large doses of morphine, pushing it to the physiological effect at least, the idea being to relieve by reflex irritation the condition which produces convulsions. This method of treatment has been adopted in Dublin, and is a fair representation of modern English practice and is the practice which is largely being followed in London, and, it is claimed, with very excellent results indeed. The treatment consists in administering not less than ¼ grain hypodermically in one dose, doing it immediately. The patient is then put into a hot pack, and forcibly delivered, unless the cervix is sufficiently dilated to use the forceps. I am well aware that some do not believe in this, but I feel that the experience of these large maternities in Dublin and London has been so good, results have been so excellent that they have finally adopted it as one of their chief methods of treatment, and the fact that it has been so taken up by such conservative obstetricians, should make us think it is worthy of some consideration.

Another method is used in Germany and to a lesser extent in Vienna and also in Italian practice, and that is, the method of rapid dilatation. The dilator consists of sometimes four, sometimes six branches, powerful enough so that the cervix can be expanded in 15 or 20 minutes to its full dilatation, allowing the child to be delivered with forceps immediately. This method has apeared in all the American journals, and it certainly has created a very favorable impression. Many operators that I know personally advocate it as being very valuable. I should like very much to hear this question discussed. There must be many here who have had an extensive experience.

GILBERT FITZPATRICK, M. D.: If eclampsia is a toxemia morphine would not be indicated under any circumstances. I spent six weeks in the Rotunda Hospital, and they were then using the eliminative method, depending to quite an extent upon a large amount of normal saline, and they were meeting with such wonderful results that they were much impressed with it, and beginning to give up the idea of morphine treatment for eclampsia.

Eclampsia is certainly an intoxication, and we should use everything that will increase the elimination of waste products, and we know that in this condition it is impossible to get a diuretic into the patient quick enough, unless it is salt solution, and this will increase elimination very rapidly. I believe that the bag should be suspended about four feet. I was very glad to hear Dr. Ward speak of croton oil, because that is very effective ,and operates very quickly. Then, of course, the pores of the skin should be well opened by action of the hot alcohol pack, but the morphine idea I am decidedly against, because I have seen it do harm in cases.

F. D. WORCESTER, M. D.: I am very much pleased with the remarks made by the gentleman who just addressed the meeting. I am first, last and all the time for the salt solution. Since beginning that treatment I have never lost a case, and I have had some bad ones. I believe in those cases that cannot be controlled by catharsis and elimination, that it is best to empty the uterus, and immediately to use the salines.

E. B. HOOKER, M. D.: I first wish to thank you all for the very intelligent and very generous discussion you have given my paper. You have brought out and emphasized, I think, all the remarks I made. The discussion has drifted a little from the region I intended it to go, but to the advantage of your enlightenment. I intended to direct your attention rather more to the point that all convulsions occurring during labor were not necessarily puerperal convulsions, that some were of the toxic type, and as the gentleman on my right has said, we do not know what the toxins are, but we do know there is a toxic type, and treatment of that type is very different from the epileptic or plain type, and I made the point, which you have further elaborated, that however valuable the homeopathic remedy may be in its true sphere and when it is well indicated, there are conditions, where, if we rely upon that alone, we are not doing our full duty. I have had in past years a few bad experiences myself. In former days I endeavored with the indicated remedy, selected as carefully as I knew how, to bring a woman out of coma and collapse, but where there is great arterial tension, where all the functions are practically gone, that is the case where the saline solution will save life if life can be saved, and if we just use the homeopathic remedy alone we are not doing our full duty.

I differ somewhat from the gentleman who spoke about the significance of albumen. My experience has been that if elimination is normal they do not have convulsions. Therefore, I do not place great significance on the presence of albumen in urine.

As to the question of delivery, that you have gone into quite extensively, and perhaps it is well that you did, although, as the paper was entitled "Convulsions During and After Labor," that did not come in here. I did not attempt to go into the subject of convulsions occurring some time before labor, but some time *after* labor.

In cases of epilepsy the loss of memory spoken of by Dr. Ward is quite noticeable, and it may be that many yielded to the homœopathic

remedy were the type that I referred to as neurotic, not due to toxins, but more easily amenable to the homœopathic remedy.

I have never tried bleeding. I thank the members who have spoken about the use of croton oil, and think that the bowels should be spoken of as much as the kidneys.

We are sometimes mistaken, because the patient gets well in forty-eight hours. Strokenhoff regards the disease as self-limited, and we should here be on our guard and discriminate between where the patient gets well anyway and where they get well from our assistance. I have tried opium where it seemed to be beautifully indicated, but I have never got good results when the secretions stopped. These are cases where the saline injection will save your patient. I have never tried morphine in large doses, but it seems to me irrational. Where the patient is overcome with toxines I cannot believe it is rational. I believe the true treatment for these cases is to judge first the nature of our case, then follow the outline as given by the gentlemen who mentioned the method used in the Rotunda Hospital, use all our efforts to sustain our patient, elimination, and deliver our patient as speedily and safely as we know how.

SHORT-CORD COMPLICATIONS AT CHILDBIRTH

B. FRANK BETTS, M. D.
PHILADELPHIA

In the development of the human foetus nature usually provides the child with an umbilical cord attachment of such liberal proportions as will secure to it as much freedom for growth and independent movement in the amniotic sack as possible, with the least risk from embarrassment to the circulation at delivery or until it is in a position to maintain a separate existence.

Authorities have reached slightly different conclusions respecting the usual length of this structure. It may be said to average from eighteen to twenty-four inches. Greater length than this exposes the child to the risk from entanglements, displacements and compression, which may compromise the infant's perfect development or safe delivery.

Tyler Smith exhibited to the Westminster Medical Society of England a cord which measured fifty-nine and one-half inches in length. Negebauer saw one that was sixty-seven and three-fourths inches, and Churchill had one eighty-eight inches long. Schneider's case with a cord one hundred and twenty inches long is cited by many obstetric authorities. The shortest seen by Charpentier, of Paris, measured eleven and one-fifth inches. Devilliers measured one eleven inches. Reil and Meissner have each seen one five inches in length. Of 12,303 cords measured in the Obstetric Department of the Hospital in Prag, the shortest was four inches. Malgourye reported one two and one-half inches in length.

A long cord, from its liability to become tangled or wrapped about the fetal members, may become relatively short. Hence, we may have either relative or absolute shortening of the cord as a cause of serious danger to both mother and child at child-birth. For the mother there may be protracted labor, great increase in the amount of pain experienced, and from premature, partial or complete detachment of the placenta, either concealed or palpable uterine hemorrhage, previous to delivery. For the child, compression or premature rupture of the cord and its consequences.

A case seen in consultation is deemed to be of sufficient importance to be reported in this connection. The patient was an admirably developed primipara, most happy in the prospect of maternity. She was

supposed to have been pregnant more than nine months. The first stage of labor was protracted and exceedingly painful. For twenty-four hours there was but very slow progress made. The sack ruptured soon after the first pains came on. Finally the forceps were applied when the cervix was sufficiently dilated. Their application was attended with a very profuse discharge of blood, from the vagina, which had evidently been pent up in the uterine cavity by the ball-valve action of the fetal skull, plugging the cervical opening from the uterus. As the employment of the forceps did not facilitate delivery I was sent for. When I reached the patient's suburban home, she appeared blanched, almost pulseless and very weak. When the forceps were again applied to the head within the cervix, another copious discharge of blood came down through the vagina. Under ether narcosis, the head was brought through the cervix into the vagina, when it effectually prevented all external evidences of hemorrhage, and the patient's condition improved slightly. Soon afterward the head was delivered, but the progress of the large, firm thorax was delayed and a very tense umbilical cord was found to exert traction upon the fetal structures at the umbilicus and effectually prevented descent. Pushing a pair of scissors over the perineal surface of the vagina, well guarded by the fingers of the left hand, the cord was cut and then clamped by an artery clip, after which delivery was easily effected. Immediately following an unusually large quantity of clots and liquid blood were discharged and the patient's condition was again serious. The concealed hemorrhage from a partial detachment of the placenta had already drained the patient excessively, so that uterine inertia had to be overcome by kneading the fundus, until the placenta was expelled by Credes' classical method.

The mother made a satisfactory recovery in child-bed, but remained anemic for many months. The baby was plump, firm and well developed. The cord was cut too short and had to be tied close to the abdomen; on the second day I was again summoned in consultation on account of very copious hemorrhages from the baby's bowels, and it died shortly after my arrival.

In this case the cord measured about eight inches and the child weighed nine and one-half pounds.

Before the rupture of the amniotic sack, we have no reliable evidence of short cord complications, except as they may affect the growth and development of the foetus. When there is an abundant accumulation of the amniotic fluid the sudden descent of the child by gravity, in case of its evacuation while the patient is in the vertical position, will incur the liability to a detachment of the placenta prematurely. From a more gradual discharge of this fluid, or when the accumulation is not abun-

dant, the contractions of the uterus about the child will maintain the same relations in the distance between the umbilical and placental insertions of the cord at the fundus, as before.

When the child presents by the breech and it is astride a short cord, as when the cord passes down from the umbilicus over the pubes and perineum, complications may readily ensue of the most serious character.

Leaving out of consideration the effects of constriction from winding of the cord about the fetus in the production of strangulation, and deformities during the developmental stage, and confining ourselves exclusively to the complications at child-birth, we have strangulation of the child from wrapping of the cord about the neck, a complication most frequently met with and requiring in ordinary cases relief by pulling the cord down and slipping the ring over the child's head; or if the cord is too short to go over the head it should be cut and clamped. (The precaution should be taken to cut at such a distance from the umbilicus as to leave length enough after the infantile end has retracted, from relief of tension, for efficient ligation.) Again, we may have premature rupture of the cord, less frequently met with—detachment of the placenta and hemorrhage—a very dangerous complication for both mother and child, and lastly, inversion of the uterus, either partial or complete.

As the efficient treatment of short-cord complications will depend upon an early diagnosis of the condition, it is important for us to bear in mind that a short cord may produce more than usual suffering and delay, in descent of the child, after the rupture of the amniotic sack during the progress of labor, or hemorrhage of uterine origin, at the completion of the first stage, or at any time during the progress of the second stage.

If the progress of labor is delayed, the pains severe, the os dilated, and there is no other apparent obstacle to delivery, and especially if hemorrhage supervenes during the second stage, attention should be directed to the possibility of a short-cord complication.

Cazeaux mentions a phenomenon in this connection, which may be noticed in some cases, if the head is low and the finger is applied to the presenting head, it appears to advance during a pain, but recedes immediately when the pain has ceased, as though the fundal portion of the uterus regained its primitive position after being dragged down by the advance of the child. In some instances an umbilication of the fundus may be detected by external palpation during a pain, but when the placental attachment is to the side of the uterus, these phenomena will not be present.

When the head is engaged in the perineal strait, the usual retraction after a labor pain is due to the reaction of the perineal structures, which forces the head back again. This must be differentiated from the retraction due to a short-cord attachment, which commences much sooner, and becomes more marked as delivery progresses.

The most we can do for short-cord cases is to evacuate the amniotic sack early, compress the fundus about the fetus and apply the forceps to effect an early delivery, if uterine hemorrhage is an attendant. When a short cord complicates the latter stage of delivery, compression alone may suffice, unless there should be hemorrhage with weak or inefficient uterine contractions, when the forceps should be used. When there is danger of the child becoming asphyxiated, the cord should be cut if it can be reached, and delivery effected as speedily as possible with the aid of the forceps, if necessary.

THE MANAGEMENT OF THE PLACENTA IN EXTRA-UTERINE ABDOMINAL PREGNANCY AT FULL TERM, WITH REPORT OF A CASE. CELIOTOMY AND RECOVERY OF MOTHER

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Extra-Uterine Pregnancy is so frequently observed by surgeons at the present time that the narration of an ordinary case is hardly justifiable. But the case to which I shall call your attention is one of the rare anomalies of obstetrical experience. It is a case of extra-uterine pregnancy, primarily tubal, which went to full term, though the history records an attack of sudden pain, unconsciousness and weakness on or about the fourteenth week, which would indicate primary rupture. Probably it was a case of tubal pregnancy with primary rupture into the broad ligament, ultimately advancing to full term, with preservation of the life of the foetus, a still more rare anomaly. The history will reveal the facts that they are eminently worthy your consideration.

The patient was Mrs. S., nationality United States, Aet. 41. Mother of seven living children; one miscarriage. Admitted to the maternity ward of the Flower Hospital December 21, 1902, at 10:30 a. m.

Previous labors normal. Previous childbeds normal. Last menstruation April 4, 1902, duration one day, amount scanty. Quickening latter part of June. Excessive nausea all through pregnancy. Latter part of July had a "fainting spell," fell unconscious to the floor; was placed in bed and after a time recovered, but does not know the details of the attack further than as described. Patient rallied and has gone on to full term, with more or less increasing pain and greatly increasing distension. *Examination on admission,* Inspection and palpation—nothing unusual. *Position*—Transverse. *Presentation*—Transverse; head to the right. *Auscultation*—Uterine souffle present. *Vaginal examination*—Vagina—oedematous; cervix—not obtained; os externum—not obtained. *Mensuration*—distance between spines, 21 cm.; between crests, 24 cm.; R. O., 21 cm., L. O., 21 cm. *Conjugate diameter,* 18 cm.; conjugate diagonal, 11 cm.; conjugate veta, 10 cm. Date of expected confinement about January 9, 1903.

The patient was brought to the hospital by her physician, Dr. J. Oscoe Chase, of New York city, who, by the way, had already concluded that the case was probably extra-uterine pregnancy, and this diagno-

sis was confirmed by Dr. Wm. Tod Helmuth. She was admitted to the maternity ward December 21, as labor was thought to be imminent on account of the pain. During the few days immediately following admission the patient was examined by Professors Helmuth, Bishop, Hamlin and the writer, and members of the house staff. The physical condition was unique. Per vaginam the cervix could not be felt. The entire upper pelvic space was a solid mass, encroaching well into the pelvic cavity posteriorly. The examining finger could be passed up behind the pubic bone, into a cul-de-sac, where it was supposed the cervix existed, but it could not be detected by any of the examiners. Externally just above the pubes was a flat ovoid body, five or six inches in length and perhaps five broad at its widest part, immovable but possessing decided contractile properties. The patient suffered from dysuria and the urine was laden with pus. The bladder was drawn up to the right and the catheter passed two-thirds its length before the bladder was reached. The flattened ovoid body referred to hardened and changed its shape when irritated by the hand. Foetal heart sounds not heard. The position of the child was transverse, with head in the right flank. The abdominal wall was extremely thin. Upon making a quick tapping impulse against the head it would recede from beneath the fingers, against which it immediately rebounded. It was so superficial in its situation that it appeared impossible that there was little more than the skin of the abdominal wall interposed between the fingers and the child. The question of diagnosis was the first point to be determined. That pregnancy existed there could be no doubt, but whether the child was in the cavity of the uterus, or outside of it, was the question at issue. The words of the late Prof. Thorurn, of Manchester, England, written after an extensive experience of extra-uterine gestation and of diagnosis in doubtful cases came forcibly to my mind. He said: *"Granted an absolutely certain pregnancy, with very strong suspicion of its being extra-uterine, the probabilities are nevertheless very greatly in favor of its turning out to be intra-uterine."*

Excessive thinness of the abdominal wall is a condition which is met with in extra-uterine abdominal pregnancies, and is very strongly suggestive of this state, but it is very liable to mislead if relied upon implicitly, since both the abdominal and uterine walls may be extremely thin and the child be within the cavity of the uterus. Furthermore, the well-known fact that the great majority of cases of extra-uterine (tubal) pregnancies terminate in primary rupture with death of the foetus before the fourteenth week, and that full term abdominal pregnancies are among the rarest anomalies of obstetrical experience, caused

the writer to hesitate and weigh well all the evidence before pronouncing the case to be one of this variety. The possibility of a thin-walled retro-displaced sacculated pregnant uterus was thought of, and the presence of the cervix high up above the pubes was considered as possibly corroborative of this condition. And yet this seemed improbable in the light of history and the physical signs, while the flat ovoid contractile body on the front of the gestation sac could only be accounted for on the supposition that it was the undeveloped though enlarged uterus lying in front of and upon the gestation sac.

The symptoms strongly in favor of extra-uterine abdominal pregnancy were the following:

Undoubted pregnancy, as indicated by the cessation of menstruation.

Breast signs and quickening.

Symptoms of primary rupture about the fourteenth week.

The presence of a body which could not be interpreted as anything but the undeveloped uterus from its shape and contractility, resting on anterior wall of gestation sac.

The extreme thinness of abdominal wall, through which the child could be felt and easily moved (external ballottement).

The absence of the cervix or any opening into the uterus.

The symptoms indicating the necessity for immediate operation were the bad condition of the patient; she was suffering pain, becoming septic, temperature ranging from 99 to 101 degrees and inability to retain anything upon the stomach. The child was dead and there was absolutely no possibility of its being delivered by the natural route in any case, whether intra or extra-uterine. In this opinion Drs. Helmuth and Bishop agreed, and there was general unanimity of opinion that the case was one of extra-uterine full term abdominal pregnancy—the child having expired at about the time the woman was admitted to the hospital.

The patient was prepared in the usual manner and the operation was performed on December 29, 1902, by the writer, assisted by Dr. Joseph H. Fobes, House Physician; Dr. Doremus, House Surgeon, and the House Staff, many physicians and students being present.

Details of Operation.—Abdomen opened by a long incision, one sweep of the knife being sufficient to expose the fœtal sac, which bulged into the opening freely on account of the thin abdominal wall and the great distension of the cavity. Enormous sinuses were visible coursing in the anterior wall of the sac. Extending across the sac was the left ovary and tube closely adherent and directly in the line of

the incision. The right round ligament was adherent to anterior sac wall on the right side. Gauze packs were placed outside the sac all around to protect the peritoneal cavity. The left tube and ovary were ligated and removed. Severe hemorrhage occurred and all attempts to check the flow were without effect as the blood came from the large placental sinuses. An incision was at once made into the sac large enough to admit two fingers, the feet were seized and a full term male child was delivered, weighing 7½ pounds. It had evidently been dead several days. The cavity of the gestation sac was packed with gauze and pressure exerted upon the placental edges to check the bleeding. After a few moments the pack was removed, the cavity washed out with normal salt solution and another pack inserted and allowed to remain. The gauze outside the sac was removed and the edges, including the placental tissue, were stitched to the abdominal wall with silk ligatures. This controlled the bleeding entirely, and at the same time shut off the peritoneal cavity from the external wound. The removal of the gestation sac entire, including the placenta, was considered desirable, but it was found to be inexpedient to do this owing to the fact that the entire right broad ligament was involved, and the cavity of the gestation sac extended to the bottom of the pelvis. Furthermore, the placenta extended over nearly the whole of the interior of the sac and it was impossible to remove it. The umbilical cord was of average length and was attached to the left side of the gestation sac.

The post-operative history condensed from the bedside notes is as follows:

During the two days following the operation the temperature did not exceed 100 degrees. The packing was removed in thirty-six hours and the sac irrigated with peroxide of hydrogen (50 per cent) and $HgCl_2$—1:5000. The third day the wound was irrigated three times with peroxide, 50 per cent, and Electrozone, 1-6. The temperature ranged from 99.4 to 102.4. Placental tissue removed at each dressing, at first only in small pieces, but later it came away in large pieces; odor very offensive. In all subsequent dressings Formalin, 1-1000, was used, at first twice and then only once a day until placenta was all removed and the odor had ceased. In two weeks' time, under this treatment, the wound was clean and granulating finely. After each cleansing the sac was packed with plain gauze, soaked in electrozone 1-6, or saline, or what gave the best results of all—Formalin 1-2000. The patient sat up twenty-nine days after the operation and was discharged on March 18, practically well, having gained very much in general health and appearance. This excellent result was largely due

to the devoted care given to the patient night and day during all those weeks by the House Physician, Dr. Joseph H. Fobes.

The special topic for discussion to which I would invite your attention is this, viz:

The Management of the Placenta in advanced extra-uterine Abdominal Pregnancy.

This subject affords a problem which rises superior to all established rules of surgical procedure. Each case must of necessity be a law unto itself. No two cases can possibly be alike in all respects, although the same general procedures will apply in cases which are similar. That this must be so is evident from the variety of pathological processes witnessed by different observers as knowledge on this subject has accumulated. As an example of the different varieties of placental development which may take place—the history of a tubal abortion will afford a good example. If the fœtus escapes from the end of the tube (three-fourths of the cases of tubal pregnancy terminate in this way) and the placenta is retained within the tube intact, further development is possible and gestation may go on to full term as a so-called abdominal pregnancy. In such cases, after the escape of the fœtus, the tube may and often does close down on the placenta and form a sac in which the latter remains during the rest of the pregnancy. The removal of the placenta in such cases is a simple procedure, accomplished by tying off the ovarian and uterine arteries and by continued or interrupted suturing of the broad ligament. In other instances, though the placenta remains attached to the tube wall, it increases in size, and its peripheral portion extends beyond the tube so that the organ eventually becomes implanted partly upon the tube and partly upon the uterus, pelvic floor, bladder, rectum or intestines. Primary ligation of the blood supply would here also greatly lessen the danger of hemorrhage and facilitate the removal of at least the sac and perhaps a part of the placenta. When the placenta is spread out, with its blood supply coming from the broad surfaces that render ligation impossible, as when it is attached to organs, or when it lies upon the iliac peritoneum, the operator is compelled, if the placenta is disturbed at all, to check hemorrhage by aortic compression and direct pressure of gauze wrung out of hot water. If the placental attachment is widely diffused and the hemorrhage seems impossible to control, by ligature or compression, it is far better to recognize the fact early before it is disturbed and made to bleed. It may then be left *in situ* and the wound closed. If necessary the wound may be reopened whenever the symptoms indicate the necessity for so doing, the placenta then being removed at once or in fragments during the

succeeding days and weeks, the sinus being kept clean by constant attention and free use of H_2O_2 and Formalin solutions 1-2000. The entire placenta will come away in time, even under these adverse circumstances. The placenta has been left in the abdomen, the wound closed and the patient has recovered; in other instances death has ensued.

Tubal pregnancies which rupture into the broad ligament are the most favorable. They usually terminate by death of the ovum and formation of a broad-ligament hæmatoma. But further development of the fœtus may continue between the folds of the broad ligament. The termination depends very much upon the extent to which the placenta has been separated from its tubal attachment. If not so great as to destroy the life of the fœtus the placenta may develop upward, lying above the fœtus, or it may grow down between the folds of the broad ligament, having an attachment in that case partly to the tube and partly to the pelvic connective tissue. These are the cases of *extra-peritoneal* or *broad-ligament* pregnancy. In this variety the sac and placenta is entirely beneath the peritoneum and the latter may be pushed up, even stripped up for a considerable distance from the anterior abdominal wall. In cases of this variety which continue to develop a secondary rupture occurs and the fœtus is extruded into the peritoneal cavity. If necessary a vaginal drain may be employed; to full term. An operation here would call for first the removal of the fœtus, tying cord close to placenta, then ligating off the main arterial supply and removal of the sac and placenta, or by partial exsection of the gestation sac, leaving enough to cover over the raw surface, and then plaiting it down to shut off communication with the general peritoneal cavity. If necessary a vaginal drain may be employed; this would afford a gratifying safeguard against hemorrhage and sepsis. (Martin's method.) In some instances the removal of the entire uterus has been deemed necessary, so involved has this organ been in the general mass. In cases of extra-uterine gestation which are not far advanced, and where it may be fairly assumed from the shape and situation of the mass that it is extra-peritoneal, it is a good plan to start the primary incision near the pubes and enlarge it when the nature of the condition is ascertained. By so doing one may avoid opening into the peritoneal cavity, and then if it becomes necessary to leave the placenta *in situ,* the conditions are more favorable for drainage than when the peritoneal cavity has been opened.

In the case which is reported here today the gestation would seem to have been one of those rare instances of tubal gestation which went to full term, or perhaps one of the still rarer variety in which broad

ligament rupture first occurred, the placenta retaining its vitality, the fœtus developing and as it grew upward pushing the placenta before it—going on to full term without a secondary rupture—the walls of the tube and the broad ligament constituting the gestation sac (extra-peritoneal pregnancy). When the abdomen was opened enormous sinuses were seen coursing through the wall of the sac and the slightest interference with the sac wall gave rise to profuse bleeding, the blood "welling" up as if it were pumped by a powerful force from within. The placenta was spread out all over the upper surface of the sac; there was no point where one could penetrate it without going through placental tissue. The uterus, left tube and ovary and right round ligament were pushed up in front of the gestation sac and tightly adherent to it. There was nothing to do but go right through the sac, deliver the child and trust to compression to stop the hemorrhage. It is probable that the death of the child a week or ten days previous to the operation may have been favorable in that the placental sinuses may have been partly occluded by thrombus formations. In such cases as these undoubtedly the best plan is to stitch the wall of the sac, including the cut edge of the placenta to the abdominal wall. This checks the hemorrhage mainly and shuts off the peritoneal cavity from the cavity of gestation sac.

From an examination of a "Table of Extra-Uterine Abdominal Pregnancies," (148 cases), from 1880-1898 (six to sixteenth months), compiled by Dr. Edward A. Ayres, of New York city, I find six cases in which the sac was stitched to the abdominal wall, the placenta coming away in pieces during the following weeks. All the mothers recovered.

In one of the sac was 1½ cm. thick. Mother recovered; does not state method of placental management.

In seven cases the uterine and ovarian arteries were ligated. All the mothers recovered.

In one case the entire sac was removed.

In seven the placenta came away in pieces for five days to several weeks. All the mothers recovered.

In one the placenta never came away and the mother recovered.

In three the placenta was cut through in first incision and one mother recovered and two died.

In one the placenta was removed and a vaginal drain applied.

Of the 148 cases 44 mothers died at varying intervals after operation and 104 recovered.

To this paper of Dr. Ayres the writer is much indebted for suggestions concerning the management of these rare and difficult cases.

DISCUSSION

GEORGE R. SOUTHWICK, M. D.—I am sure all will agree with me that it has been a rare treat to listen to such a presentation of such a rare and interesting case, and we can hardly fail to admire the skill and accuracy of observation and excellent judgment shown in the performance of such a difficult operation. Those of us who have had opportunities of seeing the conditions of the abdominal cavity in advanced extra-uterine pregnancy, that is at or near full term, cannot fail to remember the unusual anatomical conditions which usually are present. And, perhaps, the most characteristic of all, the one which we dread to see the most, is the peculiar anatomical formation where the contents of the abdomen are displaced, and the placenta is developed in a manner which is entirely foreign to our usual ideas and conceptions of the growth and formation of the placenta. Instead of having a compact mass of tissue, which we ordinarily see, we find the placenta usually spread out over a large area. The placenta is thin, not thick, and in a general way of about twice its ordinary diameter. Its position and relation to adjacent structure must necessarily be very varied. It may be attached and limited in its attachment to the broad ligament. It may be within the broad ligament, as has been shown in this case. It may be in the free peritoneal cavity and then we usually find it spread out over the intestines and, then, as has been stated, its attachments are widespread. Adhesions are invariably present and we find, as a consequence, distended sinuses, full of blood, which are sure to cause severe hemorrhage the moment they are touched; the placenta, too, being attached to the intestines, the peritoneum, or even to the abdominal wall—I have seen it attached to the abdominal wall—so that with the very first incision through the abdominal wall the placenta is divided, immediately causing profuse hemorrhage. We have here no interlineal contractile structures, and the least interference with the placenta means hemorrhage of a severe type.

So in the treatment of these cases one of the first things with which we are always confronted is the management of the placenta, and the management of the placenta must depend largely upon the anatomical conditions which are present. If the placenta is so attached that we cannot place ligatures beneath it, as, for instance, if it is attached to the intestines, the placenta is the thing then to be always left alone, for interference with it, under such conditions, means hemorrhage which we cannot control, even by gauze packing, because the blood vessels are so large. The smaller blood vessels can be controlled by pressure and packing, but with the large vessels it is a dangerous expedient. Really the first question demanding consideration is one of anatomical conditions. If we have a sac so situated that it can be removed we can control the hemorrhage by suturing the opposite broad ligament, as is sometimes the case, dividing it down by progressive ligation and division, dividing the uterus at the neck and across, underneath and opposite the broad ligament and tying the uterine artery there; or if it is so situated that we can tie the uterine artery external to the brim

of the pelvis we may succeed in doing it. But in my opinion we should never attempt to touch the placenta until we know where we are; otherwise we are liable to get into deep water in the endeavor to control the hemorrhage.

So we have two courses open. If we can remove the sac it is better surgery to remove it and leave nothing to decay, to degenerate, or to be the source of septic infection. If the anatomical conditions are such that we are liable to face severe hemorrhage in so doing, and probably fail in the attempt, then I believe it is considered the better practice to follow the course first outlined here, which was followed so successfully, simply suturing the sac to the abdominal wall, shutting off the placenta and its attachments from the peritoneal cavity, draining from above or below, and in time, with the closure of the sinuses, the placenta will separate and come away—sometimes in large pieces, sometimes in smaller, but it will come away and the sac gradually sink down, its cavity become obliterated and the patient recover. Convalescence is apt to be protracted, but better a protracted convalescence than the danger of hemorrhage which we are compelled to face.

I am very glad to hear the essayist speak of the difficulty of diagnosis; these cases are rare, and they are difficult to diagnose. It is very difficult sometimes to tell the difference between these cases and cases in which we suspect, for instance, a retroverted gravid uterus in which the cervix is usually carried high above the symphises pubis and the fundus of the uterus is thrown up into the abdominal cavity. It seems to me a safe rule in practice in these cases that where there is any doubt it is well to give the patient the benefit of the doubt. It is a very simple thing to insert the hand into the vagina—the patient, of course, being under ether and everything being made ready—it is an easy thing before the abdomen is actually opened to insert the hand and find out the position of the cervix, pulling it down, if necessary, with the forceps, to ascertain the depth of the uterine cavity.

Now, of course, in extra-uterine pregnancy we know the uterine cavity is increased in length, sometimes materially so, both by enlargement of the uterus up to a certain size and also by traction upon it. But we do not get anything like the increased depth of the uterus to correspond with what should be the depth at full term uterine pregnancy. So the depth of the uterus is one diagnostic point. It is also possible in some cases to carry the forefinger well up into the cervical canal and feel by actual touch whether the presenting part can be felt within the cervical canal.

The whole hand must be carried into the vagina; but it is better to do this than to run the risk of a mistake in abdominal section. Hence I believe it is a wise plan in these cases to make sure of our diagnosis, if at all possible, before we open the abdominal wall. In this case the diagnosis was made accurately and positively, and there was no such necessity. But as a general rule, I think, in handling these cases (because these cases of extra-uterine pregnancy at full term are so rare), it seems to me the wisest plan to ascertain the condition of the uterine cavity before we proceed to immediate action.

Another point I should have been very glad to hear the essayist discuss and which I hope will be discussed here, and that is whether, given a case of extra-uterine pregnancy at full term and recognizing the dangers which are liable to be present, both in the operation itself—the primary operation—and the dangers which are liable to attend any attempt at the removal of the placenta, if we attempt it, and the danger of sepsis which we must face—ascertain amount of danger—if we stitch the cyst to the abdominal wall and drain, whether it is better, providing the patient's condition is one which admits of delay, if there is a choice, as there is in some cases, whether we should proceed to immediate operation, with the hope of not only relieving the mother but with the possible hope of saving the child's life—whether that is the better plan or whether it is a better plan to wait until the child dies and operate a little later? For, after the child dies the sinuses close and the fetal circulation ceases, and then the operation can be performed with very little danger of hemorrhage. This is a more conservative plan; it is a safer plan for the mother, because of the lessened liability of hemorrhage. Of course this means that the child must be lost, but do we gain much by trying to save the child?

Now, in reference to other cases; I have not had occasion to look up this question recently, but not long ago I had occasion to make some inquiries concerning the conditions of the children that are delivered by operations of this kind, and it was found that a very large per cent of such children were deformed; that very few of them were matured, or healthy, or living, or become perfect children. We are very apt in these cases to find serious deformities in limb or body; children that are so misshapen and misformed that they are not likely to live to maturity, nor is it desirable that they should live. We cannot look upon children in these conditions and compare them with children born at usual full-term of uterine pregnancy.

In view of these facts I believe there is a chance for the expression of honest opinions as to whether it is a wise plan to attempt to perform immediate operation or to wait until the child has died and then perform the operation similar to the one which has been performed so successfully in this case. I believe there is a great deal to be said in favor of the latter plan of operation when the conditions of the patient admit of it. And at the time of the operation, itself, I think we should examine with the utmost care as to whether we should attempt to remove the gestation sac when anatomical conditions are such as to make the operation extremely hazardous to the mother, rather than take the more conservative course. I believe that in the large majority of cases the mother has a better chance for her life with the sac stitched to the abdominal wall; the sac in this way shutting off the abdominal wall and the case treated in a conservative manner. Do not attempt to do a major operation in the strictest sense of the word—in my opinion one of the most dangerous operations known to surgery—attempt to remove the entire gestation sac. Only those who have seen the frightful hemorrhage which usually attends that kind of procedure can imagine what a difficult and dangerous operation it is.

B. H. OGDEN, M. D.—I have very little to add to what has been said upon this paper except to report an experience in consultation with another physician, because it comes but once in a lifetime to many of us. The case was almost identical with the one reported by Dr. Danforth in his excellent paper, with the exception that in this case there was no gestation sac. The difficulty of diagnosis was such as the Doctor describes. The abdominal wall was exceedingly thin, like tissue-paper, and the foot of the fœtus could be easily picked up through it. This child was alive and we decided to secure its birth by celiotomy while living. The operation was fortunately one of not great difficulty because the placenta was attached to the left broad ligament and the sides of the uterus almost exclusively. No difficulty was experienced in getting the ligature entirely around the placenta and the child was delivered and hemorrhage controlled without much trouble. The abdomen was immediately closed and the woman made an uneventful recovery. The child, although living at the time, did not live more than three or four hours, and was deformed, both feet being talipes varus, one side of the head was misshapen, due, undoubtedly, to its lying in the abnormal position. So the fact which Dr. Southwick has just stated is confirmed by my experience concerning the deformity of these children. This is also the observation of the authorities—that these children do not live long and are usually deformed. Why this child did not live I am unable to say. It breathed normally, but it was really fortunate in this case that the child died.

The danger of hemorrhage from operating while the child was living did not seem to have been increased in this case, but in many cases there might—indeed does exist—great danger and a hemorrhage most difficult to control may result. It would seem to me from my experience that while we were most fortunate, it would be better to wait until the child had died and then some time after proceed with the radical operation. In this case, as evidenced by the history, there was no immediate haste. The woman had a gestation period of severe pain. About ten or twelve weeks following conception she had an attack of severe abdominal pain and from that time on through the remaining months she suffered from general abdominal pain—not of intense type, but so much that it was necessary to exhibit some form of an opiate to alleviate the suffering.

L. K. MAXWELL, M. D.—In regard to the methods of making an examination, as suggested by Dr. Southwick, for the purpose of definitely arriving at a correct diagnosis, I believe the time expended in making such an examination and the great difficulties surrounding these cases, together with the shock imposed upon the patient, would very materially increase the risk of recovery, and I think it would be wise to wait, like the case reported by Dr. Danforth, until the death of the fœtus, rather than resort to the manipulations as spoken of by Dr. Southwick. In regard to Dr. Ogden's case there was some cause for haste. In that case if the woman had been permitted to go on until her full term, with an abdominal wall as thin as tissue-paper, I would have been afraid she would "bust" before the end of the gestation period was reached.

L. L. DANFORTH, M. D.—I have not much, if anything, to say except in reference to the question of waiting, brought forth by Dr. Southwick. I believe the consensus of opinion of our best authorities is that it is better to wait, letting the child die, because of the probability that the child will not live long, and that it may be deformed. After death the thrombic formation exists, making hemorrhage much less dangerous. I should advise waiting, unless there is some necessary condition present demanding immediate operation, as it was in my case —the patient being in bad condition, temperature increasing, septic conditions present, and the child was dead and had been dead for some time, so we had to act at once.

HEMORRHAGE DURING AND AFTER LABOR

BENJ. HARVEY OGDEN, M. D.
ST. PAUL

Hemorrhage complicating labor is one of the most serious and perhaps most common accidents. Unless quickly controlled by the prompt and intelligent assistance of the obstetrician it is rapidly fatal. Every physician who is called upon to pilot a woman through childbirth, however small his experience, will sooner or later have to cope with it. Fortunate, and thankful, too, will he be if his knowledge of the causes, and consequently the best methods of control, is so clear-cut and definite that he may proceed with that precision, promptness and proper order of action which is characteristic of the *master* in any trying situation. Knowledge which is not available or is jumbled, like a crazy-quilt, is useless in an emergency. Recently it was my duty to mark the papers of some thirty applicants for the position of interne in our City Hospital, in which the answers to the question, "What are the best methods of treating post-partum hemorrhage" were so woefully inadequate and lacking in order that I determined at once, at the risk of commonplace repetition, to write a paper upon this subject. Let me say, first, that I believe the control of hemorrhage, whether during or after labor, is mainly mechanical, and therefore surgical. I have made my subject include hemorrhage during labor more for the purposes of classification, as I wish to consider mainly the treatment of post-partum hemorrhage.

Hemorrhage before the expulsion of the child, in the vast majority of cases results from placenta prævia; this varies greatly in frequency. My own experience shows four cases in 1,050, one of these being twins; only one of the four had the placenta centrally implanted, the other three were marginal. The hemorrhage in such cases is considered unavoidable and hence the term unavoidable hemorrhage is used.

Another form or hemorrhage before the birth, called accidental, is due to the premature separation of some portion of a normally situated placenta. The causes of this are often obscure. I have seen it occur when the patient was asleep, but my cases have usually given a history of some unusual exercise, such as hanging pictures, an effort to prevent a fall. The symptoms are those of pain more or less severe, sometimes absent, but always the faintness, quickened pulse, disturbed respiration

and blanched color so characteristic of internal hemorrhage. The treatment of these two conditions, i. e., placenta prævia and accidental separation of the placenta, is practically the same. Dilate the cervix by some means which at the same time stops or diminishes hemorrhage and deliver as rapidly as possible. The detail of this I will not take up, as I wish to pass on to the more careful consideration of post-partum hemorrhage, properly so-called.

This is a profuse hemorrhage occurring during the third stage of labor, or within twenty-four hours following. It is called a secondary post-partum hemorrhage, or, more properly, puerperal hemorrhage, when occurring later than twenty-four hours. Primary post-partum hemorrhage is by far the most common and is mainly due to relaxation of the uterine muscle. Anything which interferes with uterine contraction produces post-partum hemorrhage. It is very important to recognize such cases and overcome them, if possible. Such causes are: first, local exhaustion of the uterine muscle, such as comes from a long labor, or a precipitate one in which the intervals of muscle rest are insufficient for restoration of muscle tonicity. General malnutrition and serious constitutional diseases increase this danger. Disturbed innervation, resulting from mental emotions, may produce a temporary paralysis. And lastly, though in my experience less commonly, some mechanical obstacle to contraction, such as distended bladder, a fibroid, retained blood clots or fragments of the placenta.

The symptoms and recognition of post-partum hemorrage are obvious to him who *looks*. It is inexcusable for a hemorrhage to have progressed without the knowledge of the physician until the blanched face, the full pulse and failing vision, the gaping and air-hunger force his attention. The sudden gush, or the smaller but continuous stream, or the filling of the uterus should have already been seen by him. A concealed hemorrhage usually means inattention.

I will consider preventive treatment first because of its great importance and logical order; this means a thorough knowledge of the causes of hemorrhage. Do not *hasten* the detachment of the placenta unless hemorrhage makes it necessary. Give the uterine muscle a chance to regain its tone by waiting from 15 to 30 minutes; some say even longer. Also, give the patient a chance to practically recover from chloroform, if it has been used. If labor has been long or the patient nervously exhausted a hypodermic injection of strychnia 1-30 grain, is to my mind of far greater value than ergot. If the labor has been rapid and precipitate Belladonna 2x is very useful. Do not allow the bladder to become filled during the latter part of the second stage of labor. Do not permit any exciting scenes or influences. Keep

cool and show yourself the master. Always know beforehand where the syringe is, the hot water, the sterile gauze, or whatever you may need. Be prepared. Should hemorrhage occur in spite of these precautions its immediate control is imperative and is best accomplished by mechanical process. I do not believe the *immediate* control of post-partum hemorrhage is effected by drugs, whether given in dram doses or in potency, hypodermically or otherwise. This is a mechanical process and demands mechanical treatment, mostly of a surgical nature. I am speaking of the immediate control. Do not misunderstand me regarding drugs; they are useful in preventing inertia and later in maintaining contraction, but I cannot emphasize too strongly my belief that we must rely upon the mechanical means for immediate control. In the examination papers to which I referred nearly every one said give ergot, or the indicated remedy, such as Bell., China., Carbo veg., Ipecac and then went on in a desultory, half-hearted way to tell of some other things which might be done if those did not control. Gentlemen, if you have a severe hemorrhage your patient will bleed to death before your remedies will have time to act.

What are the measures I would advise? Nothing especially new, but let us have our forces available and marshal them in *proper order* and with the precision of one who knows, as becomes a good general.

First, as soon as the child is born and freed from the cord, keep one hand on the uterus through the abdomen and your eyes upon the discharges. As the placenta is being detached make compression upon the uterus. If such compression and kneading does not cause contraction, insert two fingers into the vagina back of the cervix and press it forward, while the hand upon the abdomen flexes the body of the uterus forward, thus bending the uterus upon itself. This is very effective and rarely fails to check hemorrhage. If not effective, instruct some one to prepare the hot sterile water at a temperature of 120 degrees, and while this is being gotten ready release the fingers from behind the cervix and push them into the uterus, and if the clots or membrane are found the whole hand may be inserted to feel for and remove them, at the same time rotating the hand to stimulate uterine contraction. After the withdrawal of the hand I believe it is wise to inject the hot sterile water, which is then ready, to still further stimulate contraction and retraction. I have seen but one case in which these measures were not effective, and that was a case of hemorrhage following a very difficult delivery of twins, complicated with placenta prævia, where I found it necessary to resort to my last method, viz., packing the uterus with sterilized gauze. Just a word regarding the technique of this may be indulged. Bring the patient's hips to the edge of the bed,

placed in the lithotomy position, grasp the cervix on either side and draw it down to the vulva in plain sight, then with a dressing forceps or probe it is very easy to pack the uterus from the fundus to the cervix. Uterine packing, if done at all, must be done well. These, then, are the methods in order:

First—Compression, external and internal.

Second—Hot water douche.

Third—Packing.

Many other things are advised, but these three should stand out clear and in order to every obstetrician. Ice may be used instead of hot water; not so good but might be more quickly available. Vinegar on a sponge, squeezed out in the uterine cavity, to my mind is not equal to hot water, and more dangerous. Monsel's solution may be effective, but is certainly dangerous. A Faradic battery is very effective, a bipolar electrode easily made sterile is inserted into the uterus. Such an instrument should always be at hand in lying-in hospitals. Some advise a physician to carry one with him to obstetric cases, but it seems rather impracticable.

Arndt has recommended a method which is worth considering, based upon the observation that traction on the uterus renders it anaemic by diminishing the flow of blood through the supplying arteries. Also we know that such traction through irritation stimulates uterine contraction. I have never tried it, but Arndt mentions it as certain and unattended by the danger of sepsis. His method consists in grasping the flaccid cervix with one or two bullet forceps and forcibly drawing the uterus downward as far as possible.

Occasionally hemorrhage persists in spite of a well contracted uterus; such bleeding is always due to lacerations of the cervix or vagina, and is usually easily controlled by a few stitches or temporarily by a gauze tampon. It was the attempt to control a bleeding cervix which led me to try the immediate repair of the cervix, which I have often recommended. Although it has been condemned, there is a growing belief in the wisdom of such an operation, especially in hospital practice.

During the manipulation and treatment necessary for the immediate control of the flow some remedy may be strongly suggested by such symptoms as the profuse bright flow and nausea of Ipecac, or the spasmodic gushing hot flow of Bell., or the slower bleeding of dark blood, like venous oozing, of Hamamelis, or the fainting and ringing in the ears, with the desire to be fanned, so characteristic of China., or these symptoms with those of collapse added are said to indicate Carbo.

veg., or the dark and stringy flow of Crocus, worse from any exertion. Sabina and Pulsatilla are said to be especially useful for hemorrhage dependent upon retained fragments, but the better method would seem to be to remove the fragments. Hahnemann was a firm believer in the removal of the cause; today, with our increased knowledge of the causes of disease and abnormal conditions, *"tolle causam"* has a far wider significance than in his day.

Hemorrhage after labor may not be primary, but secondary, or a better term is puerperal hemorrhage. Such hemorrhage is far less frequent than true post-partum bleeding, and in my own experience has always been due either to retained blood clots and small portions of placental tissue, or the presence of tumors, such as fibroids, polypi or carcinoma. Cases are reported in which extreme grief or fright has produced alarming or even fatal hemorrhage. Another cause is the displacement of some of the blood clots formed in the uterine sinuses, resulting from some sudden move, such as reaching for some article near the bed or lifting the baby or, perhaps, straining at stool. In this variety of hemorrhage the recognition and removal of the cause is of first importance. A careful and thorough examination should be made, probably involving the introduction of the hand into the vagina and one or two fingers into the uterus. If clots or placental tissue are found they should be removed. If these are not found the uterine tampon is to be used and not the curette. I am coming to use the curette less frequently and with more caution than formerly. After the active hemorrhage of any case has ceased and the immediate danger is passed, we should then proceed with greater leisure to overcome as much as possible the acute anaemia and distressing symptoms resulting therefrom. For this I know of nothing so quickly effective to increase the volume of the blood current as the normal saline solution. A high enema of this is easily given and other methods are rarely needed though the hypodermoclysis and rarely direct injection into the vein should be remembered. The method of auto-transfusion, accomplished by bandaging the limbs, may be of temporary benefit in a desperate case. Nature quickly begins to repair the loss, but is greatly assisted by these means and the use of a nourishing liquid food. In the beginning mildly stimulating drinks are useful, such as coffee or very small quantities of whiskey in hot water, one-half to a teaspoonful of whiskey in three or four ounces of water. More rarely heart and respiratory stimulants will be needed, such as the hypodermic injection of Strychnia, or of ether for a short time, but the use of the normal saline injection, with a well selected homœopathic remedy, is usually all sufficient.

Here, then, is the great field for the indicated remedy. More commonly than any other I think China is indicated because of its usefulness in conditions resulting from loss of animal fluids. Carbo. veg. and Veratrum alb. have more marked the evidence of collapse. Secale, Trillium, Cinnamonum, Crocus, Ustilago when the hemorrhage tends to recur. Often some of the chalybeate foods are helpful, such as Pepto-Mangan, Albuminate of Iron, Haematin, Ferri Sulph., or Ferrum Metallicum. I have found these especially helpful for the intense headaches which follow severe hemorrhage. During the first few days after severe loss of blood it is very essential that the patient should be absolutely quiet and lying down to avoid danger of syncope and the production of thrombosis and embolism.

It has not been my purpose in writing this paper to give an exhaustive review of its literature, nor any new method of treatment, but to present as forcibly and clearly as I can the indications for and limitations of each particular method, so that when such an emergency meets us we may act with the precision, promptness and effectiveness of one who "both knows and knows that he knows."

DISCUSSION

D. A. Foote, M. D.—Dr. Ogden has covered ground so fully that he has scarcely anything for me to say and and I will take but a moment of your time. I think he did not speak of an accident that often occurs which causes awful hemorrhage, and that is, inversion of the uterus, and it produces almost the severest hemorrhage, unless it is rupture of the uterus. Of course the remedy is to return the uterus and the hemorrhage ceases. The remedy which I have found to be most useful after the mechanical work has been done is Millefolium. I give it for hemorrhages from the lungs, nose and hemorrhages generally, especially in the lung, and I find it very effective.

G. B. Stearns, M. D.—I agree most heartily with the writer of the paper that in hemorrhage immediately following labor and in that following laceration of the cervix may be very readily controlled by following a routine course of never letting go of the uterus for an instant until I have either secured permanent contraction or put on a bandage to definitely prevent relaxation. I have made this a routine practice for twenty-five years. We have in so many cases contraction of the placenta, the fundus of the body being in a softened and weakened condition, that unless we have pressure back of that to prevent dilatation and damming up of the uterus, we may have profuse hemorrhage.

If the Crede method of expression is used as a routine practice and following that simply holding the uterus in the hand, keeping that steadily under compression, it may be ten minutes, half hour or maybe an hour, until the patient has recovered sufficiently to have steady and permanent contraction. That will prevent any danger of immediate hemorrhage.

GEO. R. SOUTHWICK, M. D.—The paper has been one of more than usual interest. I would like to emphasize one method of treatment to which the Doctor alluded, and that is, the following down the uterus with the hand and holding it tight. That is, the doubling of the uterus upon itself. It is not necessary to put the hand in the vagina and pull the uterus forward. By pressing down externally the uterus will come directly upon the pelvic floor. Now, if we take the hand externally and press vigorously up (I assume that the patient is on the left side), with the left hand holding the uterus firmly down in the pelvic cavity and pressing externally upward on the pelvic floor, we stop the hemorrhage and lessen the possible danger of infection.

We can thus double that uterus upon itself; we can hold those surfaces in apposition, and by doing this we can arrest almost any hemorrhage we are ever likely to see. This can be done immediately. You do not have to call for this or call for that. You can empty that uterus at the first sign of hemorrhage. You can hold those sides firmly together and no hemorrhage can take place. It is a method of treatment so simple, so free from danger of infecting the patient that it should be used more.

I hoped to hear the essayist say something in regard to prevention. In many cases we can prevent hemorrhage from taking place by watching and applying the proper remedy. When we have a long labor, the patient exhausted, pulse one hundred or over, then, of course, we have reason to expect hemorrhage. In these cases we can give remedies that tend to lessen the danger of hemorrhage. Ferrum phos., I am satisfied, tends to give relief to a tired uterine muscle. Strychnine also in considerable doses. Quinine is also valuable in many cases, and if we anticipate emergencies we can oftentimes prevent them. There are certain cases which we all dread and those are the ones with a history of bleeding, where, as has been stated, fibrin may or may not be deficient as a ferment in the blood which produces coagulation. There have been some cases of this kind which have been treated with gelatine with some degree of success. The packing of the uterus in these cases is particularly valuable.

In the treatment of placenta previa I should differ somewhat from what I understood to be the position of the essayist, that is, on rapid delivery. I think we get better results by dilating with Champitier's rubber dilator, the apex of the cone being in the cervix and the base of the cone in the uterine cavity. It makes a wedge, and by compressing the vessels it stops the hemorrhage.

I believe in slow rather than rapid delivery, unless there should be some indication for rapid delivery on the part of the child, for in placenta previa are liable to get laceration, which will materially increase the danger of hemorrhage afterward.

In regard to late hemorrhage. There is one symptom which I think is of great value. Undue amount of bleeding, not exactly hemorrhage, but a rather persistent bright red flow. It always comes to my mind that it may be due to retroversion of the uterus. I have found almost always where we get a retroversion of the uterus there is almost always a discharge of bright red blood, not enough, perhaps, to be

called a hemorrhage, but in many of these cases we will find the uterus is displaced, the fundus being down behind the symphisis pubis.

DR. OGDEN.—I would like to ask Dr. Southwick if after removal of the means of dilatation the hemorrhage does not recur?

DR. SOUTHWICK.—I have had no trouble that way.

B. H. OGDEN, M. D.—There is very little to be said. I am glad that compression as a means of stopping hemorrhage has been so well emphasized. I think these methods should be given in proper order. I should put compression first, and when it is properly used we rarely need go beyond that.

THIRD ANNUAL MEETING

OF THE

NATIONAL SOCIETY

OF

ELECTRO-THERAPEUTISTS

HELD AT

BOSTON, MASSACHUSETTS, JUNE 25-27, 1903

CHICAGO
AMERICAN INSTITUTE TRANSACTIONS
1903

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NATIONAL SOCIETY OF ELECTRO-THERAPEUTISTS

BUSINESS PROCEEDINGS

The eleventh annual session of the National Society of Electro-Therapeutists was called to order at the Charlesgate, Boston, on Wednesday, June 25th, at 8:30 p. m., by the President, Dr. N. B. Delamater.

Owing to the fact that there had been no formal meeting the previous year, there were no minutes to be read. The President gave a brief address to the Society, submitting the program as the work of the Executive Committee during the past year, and congratulating the members upon the renewed activity of the Society, as evidenced by the attendance at the meeting. The chief question that he wished to lay before them was the advisability of changing the organization of the Society from an independent body to a subsidiary society of the American Institute of Homœopathy. For the current year the Institute had treated the Society as though there were a formal alliance, giving it a place in the Institute's official program, and making us responsible for the Bureau of Electro-therapeutics and Neurology. It seemed to him best that a committee should be appointed to draft a scheme of reorganization, and submit the same at the next annual meeting. Drs. William Harvey King, Theodore C. Wiggins, J. E. Wilson and Hills Cole were appointed to membership on this committee.

Drs. W. H. Dieffenbach, Clara E. Gary and W. R. King were appointed a Committee to nominate officers for the ensuing year. This Committee in its report recommended that the present officials be continued in office another year. The Committee's report was adopted.

HILLS COLE, Secretary.

In the absence of Dr. Wm. Harvey King, who was detained at home by illness, the Society instructed the Secretary to send to Dr. King a telegram of fraternal greeting and sincere regrets.

THE USE OF THE NEWEST ELECTRICAL MANIFESTATIONS IN ENGLAND

HILLS COLE, M D.
HARTFORD, CONN.

During the past six weeks it has been my privilege to be in London, and I have made it my business, *inter alia,* to inquire into the status of electro-therapy and its allies, Roentgen therapeutics and the Finsen light.

To begin with a summary, I think it may fairly be said that the leaders in this branch of medical work in England are fully abreast of their co-workers in this country, but it does not seem to me that the use of these newer therapeutic agents there is as widespread as it is here. The men who are doing the most and best work are the few who are connected with the leading hospitals that have been equipped with modern apparatus.

Some few hospitals have a very complete equipment for the production of X-rays, high-frequency currents and the Finsen light. In some instances large sums of money must have been spent in the provision of special rooms and the installation of apparatus. In spite of their condition of chronic indebtedness the hospitals seem to be able to make occasional spurts and build and equip departments on a scale that is beyond what is to be seen on this side of the Atlantic.

For X-ray work the coil is universally used. The static machine is almost an unknown factor in English therapeutics. Efficient machines in use in private practice in England could surely be numbered on the fingers' ends. The reason universally adduced for the failure to adopt a piece of apparatus whose use has become so widespread in this country in the past few years, is the climate. The Wimshurst type of machine is that which is made, and even a machine of that type is out of service a good deal of the time, according to the accounts of physicians with whom I talked. Another reason brought forward by one of the leaders in Roentgen ray work and general electro-therapy, was the fear lest the user of such a machine should be classed as a quack. These gentlemen of shady reputation had the monopoly of the old-fashioned types of machines when first introduced, and our English confrere is so careful of his reputation that he lacks the courage to take up anything, however good, that might, in the remotest degree, savor of quackery.

Spark coils of from "8 to 16" are in use, actuated by hammer, electrolytic, or the Mackenzie-Davidson break. In the clinics where

large numbers of patients are treated daily, preference is given to the last. The tubes used are nearly all of the German type.

In radiographic work considerable use is made of various localisers, and stereoscopic radiography is much in favor For the taking of radiographs special tables are made use of provided with means of carrying the tube either above or below the patient, as the case requires.

For high frequency work the current is taken from the spark coil and run through a step-up transformer with appropriate condensers, then it is used in connection with solenoid arrangements, generally of the Oudin type. The electrodes in use are not of the vacuum type, but the glass tubes are filled with acidulated water.

For the Finsen light work London Hospital has two Finsen lamps with four telescopes each, but the other hospitals make use of smaller lamps, which treat only one patient at a time and are much less expensive. These lamps are usually fed from the mains; but there is a type of lamp having iron points that receives its energy from a high-frequency coil. Opinions as to the efficiency of this type are divided. Some authorities seem to be satisfied with their results, others have discarded the apparatus altogether.

For electro-therapeutics of the older sort, galvanism and faradism, the English profession is satisfied with apparatus that would be considered out of date by the average electro-therapeutist in America. The favorite coils, especially, are of much smaller dimensions and have fewer turns of wire than we consider essential to the best work. But then, the use made of electricity in England is very limited. Muscle testing and muscle stimulation, with general faradization, administered by means of a water bath, covers the field of electro-therapeutics as understood by the majority of the comparatively few medical men who do anything at all with electricity.

In the hospitals it seems to be the custom to leave the treatment of cases to nurses or similar unqualified assistants, using the term "unqualified" in its English sense of lacking a medical license. The radiographic and Roentgen therapeutic work is often in charge of a man who secured his position because he was a practical photographer and took up the development of X-ray plates or dabbled more or less in skiagraphy. At one of the leading London hospitals that has gone in quite largely for electro-therapeutics, etc., I found the electro-therapeutical apparatus in charge and run by an electrician and the X-ray department managed by a photographer, while the medical head of both departments put in an appearance for an hour once a week.

The principal London hospitals doing considerable work in electro-therapeutics, X-light and Finsen light therapy are Middlesex, London,

St. Thomas', Guy's, Bartholomews and St. George's. The electrical pavilion at Middlesex consists of a temporary iron structure in the front quadrangle of the hospital. It is furnished with two modified Finsen lamps, each capable of treating one patient at a time, an X-ray coil, a high-frequency apparatus with an Oudin ozonator. These are in the main room. In smaller dark rooms are other coils for X-ray work. For work in the wards a portable coil is used, worked from accumulators or storage batteries. The department is in charge of Mr. Cecil R. Chaworth Lyster, who is doing some very thorough work, and gives up several hours daily to its prosecution. He is conducting a series of experiments upon rabbits with the idea of determining, if possible, the exact effect of X-rays upon the dermal tissues. Three hundred patients a week are treated at Middlesex Hospital, and very careful records are kept. Mr. Lyster bars out the word "cure" in talking of his patients. Those patients that have been dismissed after apparently satisfactory progress are sent out on probation. Mr. Lyster has little faith in the high-frequency as a therapeutic agent in the treatment of cancer, an interesting expression of opinion, in view of the fact that the London newspapers recently published glowing accounts of the results of this agent in the treatment of this disease. It is Mr. Lyster's opinion that for deep work we must depend upon the X-ray, whereas the finishing strokes and the treatment of superficial lesions are best accomplished by the Finsen or violet light.

The electrical and radiant energy departments at London Hospital are situated at the top of the new out-door department building, on which a very large amount of money has been spent. One room is given up entirely to radiography, and is furnished with a 10-inch coil. a patient's table, movable plate holders, adjustable tube carriers, working above and below the patient, and elaborate localising apparatus. The X-ray therapy and high-frequency work is done in a separate room provided with three coils. A hundred and thirty cases are under treatment in this department. The operator here has discarded the small iron electrode lamp for the violet ray, as being ineffective. Another room of large size is given up to the treatment of lupus by Finsen's rays, and here are two large overhead lamps of Finsen's own type, each capable of treating four patients at once, and also four smaller lamps, each treating one at a time. One hundred cases a day are treated, the results so far being very satisfactory, although a verv large amount of time is consumed in the treatment. The operation of this room alone involves the expenditure of $7,000 annually. So many cases have applied for treatment that the list is full for the next two years, unless the plant is enlarged.

At St. Thomas' some rooms in the basement have been rearranged, and adapted at considerable expense, for the electrical department, but a hospital having an annual income from endowments of $200,000, and that has been fortunate enough to be the legatee of $2,000,000 within a comparatively short time, can afford to build and maintain a thoroughly equipped department. Forty-six cases in all were under treatment here when I was present. The equipment consisted of four Finsen lamps of the Marshall type, a Tesla coil for high-frequency treatments, a Miller iron electrode lamp for which good results in alopecia were claimed. In the X-ray room were two or three coils; another room contained a galvanic bath and also an incandescent light bath. Among the apparatus was a discarded static machine of the Wimshurst type.

St. George's also has a modern equipment, while at Guy's and Barts things are on a less up-to-date scale. At Guy's I saw an 8-plate 36-inch Wimshurst being turned by hand, while a nurse administered a friction spray. The operator hoped to get in a 1½ horsepower motor to run the static machine. In the radiographic department 1,200 pictures are taken a year, 30 seconds being the maximum exposure. Tubes with sodium windows are used.

Interest in this department of therapeutics has been aroused outside of London, and on more than one occasion I met physicians from country towns who had come to see what was being done and what were the best types of apparatus to install in provincial hospitals. Probably the best equipped hospital outside of London is the Glasgow Royal Infirmary. A special electrical pavilion has been constructed here which in brief consists of four rooms, the first having the transformers and the Finsen lamps, the second a Wimshurst static machine with 40 36-inch plates and having special fan motor to drive out any gases collecting in the case while the machine is in operation. A D'Arsonval high-frequency apparatus with an Oudin resonateur is also in this room. The third room contains the apparatus necessary for constant and interrupting currents for medical and surgical purposes, such as cauteries, drills, illuminating instruments, and electro-magnets; and the fourth room has all the X-ray apparatus for photographic, screen and therapeutic work. A detailed and illustrated account of this installation at the Glasgow Infirmary is to be found in the March number of the Archives of the Roentgen Ray, published by Rebman, Limited, of London, a periodical which should be read by all who are interested in this line of work. It has the best reproductions of radiographs that I have seen, and every copy contains four case charts for the systematic recording of results of treatment.

NEW THINGS IN ELECTRO-THERAPEUTICS

FRANK H. BLACKMARR, A.M., M.D.
CHICAGO

This most remarkable age is productive not only of rapid degenerative processes, physical and mental, but also of a wonderful development of practical, scientific knowledge of a therapeutic agency for their alleviation and cure. Most timely do we consider the rise of interest in, and investigation of the results of electricity, presenting as it does the most positive therapeutic agent in dealing with the necessities peculiar to the present condition of society.

Therapeutists no longer turn the dull cold ear and contribute the incredulous smile to augment the enthusiasm and ardor of the electro-therapeutist; but readily give to him the position of dignity and confidence that science has made for him. He occupies a field of labor requiring more scientific training for its development than any other branch of therapeutics—requiring a fundamental knowledge of anatomy, physiology, pathology, histology, chemistry, general physics, electro-physics, electro-therapeutics and clinical experience.

With the charlatan, the untrained, unctuous, massaging money-getter, who knows not the polarity effects of his galvanic cell, we have no dealing any more than we have with the unlicensed practitioner, because, untrained and unscientific, he is incapable of handling pathological problems.

Let there be no mistake in the mind of any practitioner of the position in the therapeutic field of the electro-therapeutist. Concerning the first laborers in the field and their results we have no criticism; the first effort never merits an unfriendly criticism when improved upon but should only be mentioned kindly in comparison with improved methods and results. The present we may criticise; it is productive of research and our methods are the more improved thereby.

The most convincing results have been achieved along six great general lines: Static, faradic and galvanic electricity; the X-rays; photography; and high frequency currents. The first three have passed the experimental stage and are merely accumulating evidence as to efficacy and technique.

My attention has been concentrated largely in the past few years on the high frequency currents, the X-rays and the actinic rays. In reference to the first I wish to present for your consideration a theory that in my estimation will explain the remarkable phenomena that arise from treating disease with high modalities.

The normal, unfatigued being, rising each morning with the consciousness of newly acquired energy, demonstrates to us that repair of waste has taken place, that energy has been conserved, and that each department of the multi-cellular business corporation is ready for an other twenty-four hours of active service.

Our knowledge of electrical phenomena, and structural and physical anatomy causes me to believe that each brain cell and ganglion is an accumulator of nascent chemical properties capable of being combined to produce chemical energy. These properties, existing in a state of equilibrium, being disturbed by volition or otherwise, give origin to chemical energy, which in turn is transformed into an electrical discharge.

Currents of high modalities are capable of inducing electrical activity in all bodies, undoubtedly restoring to the depleted accumulators their nascent chemical radicals.

I ask this question: Are the remarkable results obtained from the use of static and high frequency currents due to their influence directly upon the structure, or primarily through the nervous system?

I believe that metabolism under these modalities is increased during the time of treatment without the loss of inherent chemical and resulting electrical energy.

Recuperation is a resultant of metabolic processes and of course draws upon the source of nervous energy. Should the metabolic processes be incapable of restoring the energy in equal amount as drawn upon, the sources soon become bankrupt and pathology is the result. Now at this point electro-therapy may stem the tide because by using high modalities we are enabled to produce metabolism without further depleting the exhausted brain and ganglion cells, because the oscillatory or vibratory influence will increase this structural metabolism without the assistance of brain and ganglionic impulse.

Cases have been under observation, so-called nervous bankrupts, utterly incapable of structural function, where normal function was produced without any immediate evidence of nervous exhaustion. If the energy in the poor bankrupt brain cell is but as a drop of water, not sufficient to be capable of giving origin to one healthy normal impulse and an extraneous influence can be brought to bear that causes normal, healthy, functional activity without sapping the nerve cell of its last modicum of energy, while promoting at the same time an accumulation of energy radicals by artificially produced metabolism —why submit humanity to needless and dangerous delays? An adjuvant to medicine and surgery is at hand, only the unscrupulous and indolent refuse to observe and credit its results.

In all our dealings with vibratory, oscillatory and interrupted currents it is necessary to make certain that the sittings for such currents are but long enough, strong enough and in frequency sufficient to tend toward a beneficent accumulative result.

My attention was called in 1900 to a case of arthritis deformans of fifteen years' duration (cited in Monell's latest work, page 639). The patient had become progressively worse under medication until he could not work, the hands were so swelled that it was impossible to close them; the joints were enlarged and he finally became helpless. As the hands had been affected the longest and presented apparently the greatest difficulty it was determined to begin treatment on them. Sparks were showered on them from the tube for fifteen minutes four times a week. In a month the deposits had disappeared and the man used his hands. The knee joints were then treated and the same results obtained. It is worthy of note that only local effects were produced; while the hands were being treated no other parts were affected. The conclusion is forced on us that as sodium urate is soluble in aqueous solution and uric acid may be oxidized by the high frequency currents, the solids of both are more easily dissolved by an increased circulation brought about by vaso-motor dilatation of the capillaries. The severe pain is relieved by the primary dissipation of congestion in the brief contraction of the capillaries.

I followed this line of treatment as to dosage until my experience taught me the necessity of its limitation. The following cases will illustrate my meaning:

Case 1. Mr. K, age 42, history of cerebral hemorrhage, paralysis right side of body, aphasia.

First treatments, high frequency prolonged, lasting fifteen to twenty minutes daily. Spark gap sufficient to produce a mild stinging sensation. Patient complained of fatigue after treatment and remarked that he felt the treatment was either too severe or too long. Commencing with the third week, I began making his treatments of shorter duration, using the same spark gap. Improvement began at once. Vacuum tubes were used over the head, spine and limbs. After that, treatments lasted but from three to five minutes. Speech is now clear and he walks with ease. His treatments covered a period of three months.

Case 2. Mr. W, age 61, history of hepatic congestion and severe prostatitis.

Prolonged treatments produced an irritation. Treatments of five minutes daily for a period of two weeks brought about relief of all

disagreeable symptoms. Severe pain over liver area disappeared and prostatitis now only aggravated by severe pressure.

Case 3. Mrs. W, age 55, history of carcinoma removed from breast five years ago, severe intercostal neuralgia a resultant.

Treatments five minutes daily have entirely removed the pain in three weeks. Same patient had numbness in left hip and limb since birth of last child. She is now under treatment for this; there are periods of three or four days at a time when this numbness has disappeared, returning with less discomfort after each interval.

Case 4. Mrs. S, age 41, history of neurasthenia, has severe gastric disturbances, unable to retain food on stomach.

My first three treatments in this case lasted on an average fifteen minutes each, with very short interrupting spark. Great fatigue followed each treatment, gastric symptoms were aggravated; in fact all neurotic symptoms possible were in evidence. The following treatments were very brief at daily intervals and much benefit accrued.

Case 5. Miss M, age 30, history of simple neuritis, following an injury to foot of four months' standing.

First application relieved the pain for a little more than an hour. Patient treated every day at five minute sittings. Only ten treatments were required; a month has elapsed without return of pain.

Case 6. Mr. F, age 45, history of angina, a neurotic, poorly nourished, a great sufferer.

Treatment produced immediate relief in mild attacks. In one severe attack relief only lasted five minutes and I resorted to nitroglycerin. While treating one of the milder attacks for a long time, a return of the pain was produced with severe aggravation.

These cases I have selected, while not of particular interest in themselves, to demonstrate the advisability of brief doses at frequent intervals, preferably sittings of five minutes. There is no question concerning the accumulative benefit of this form of high frequency treatment while properly conducted; not forgetting that local lesions are in almost all cases much benefited by general treatment. I believe it to be splendid practice to give after each local high frequency treatment a general treatment to spine, body and limbs. I have used it in deafness, atrophy of the optic nerve, trifacial neuralgia, neuritis, paralysis, locomotor ataxia, rheumatism, rheumatic arthritis, diseases of the rectum and prostate gland, with marked benefit in all cases. The dosage averages between five and ten minutes with daily intervals. The electrodes used have been the ordinary glass vacuum tubes which may be had in any form to suit the cavity or area to be treated. I have used both coil and static machine as primary excitor, regulating

the intermittent spark so that there will be a mild dosage of violet discharge from the tube. My experience warrants me in giving preference to the static machine as primary excitor and I notice in the current reports the same conclusion.

Concerning the technique, the adaptability of resources to necessities governs each treatment. The principles are always the same and only in one or two instances do questions of difference or priority arise, for instance, as to any preference between Monell's Potential Alternation and Morton's Wave Current. The difference in technique is unimportant as the results are identical.

In the field of galvanism considerable benefit has been achieved in prostatic and urethral diseases resulting from chronic gonorrhea. Electrolysis by copper electrode in the urethra, three milliamperes, through the prostatic gland every other day, copper rectal electrode in the rectum pressed closely against the prostatic gland on alternate days, has cured for me a number of chronic prostatic cases due to gonorrheal infection. The germicidal influence of copper oxychloride derived by combination of the oxide of the metal of the electrode with the hydrochloric acid resulting from electrolysis is the primary cause of cure. I would recommend this procedure; the results can be easily followed by frequent microscopic examinations and are most convincing.

In the use of the actinic or chemical rays generated by the arc light there has been opened a magnificent field in the treatment of skin disease. From the unclassified mass of information on the subject of light, Dr. Finsen has sifted the evidence and determined its exact value and place in therapeutic practice. Lupus, epithelial cancer, ulcers, psoriasis, and in fact all skin lesions are amenable to its influence.

It has been proven that the chemical rays can be filtered out of the spectrum for specific chemical purposes, concentrated and focussed upon a definite area. The cure is obtained not by destruction of the tissue but by destruction of the microbic elements on which the disease depends. The vital activities of the normal tissues are also quickened thus increasing their resistance and power of defense against further encroachment.

From the literature, already generally circulated, all have become familiar with the lamps used in the Finsen light treatment. No description therefore is necessary. The most popular in use is the improved London lamp. With this I have treated the following cases which some of you have seen under treatment.

Case 1. Mrs. P, age 54, history of lupus vulgaris, right eye, right nostril and lip totally destroyed, left cheek severely invaded, was under X-ray treatment for three months in 1902. Surfaces were entirely healed. Three months after returning home area on left cheek began to show renewed activity. In fourteen months several areas about nostril and right eye were seriously involved.

Treatment consisted in the exposure to X-rays with a medium vacuum tube for five minutes in the mornings; exposure to the London lamp, close contact, fifteen minutes in the afternoons. The scales were removed from area before first treatment and kept off by daily bathing with peroxide of hydrogen. Any danger of infection from without was prevented by using bezoinated zinc ointment and ichthyol, ten minims to the ounce for the first three days after scales were removed.

Improvement began at once and by the end of the second week case had begun to show control. In five weeks she appeared entirely well and returned to her home in Dakota.

Case 2. Mrs. McD., age 58, history of epithelioma, right nostril, size of a penny with foul sanguinous discharge.

I first curetted away all debris until severe hemorrhage washed it out thoroughly, then blanched the tissues by adrenalin solution 1:1000. Exposure to actinic rays for twenty minutes daily followed. I removed scabs and hardened area, keeping freshened surfaces each day In three weeks healthy granulations began to show; discontinued radical measures only using Finsen light. In six weeks area was entirely healed.

Case 3. Mr. A., age 45, history of lupus vulgaris, two large areas on right shoulder and arm were curetted and cauterized by skin specialist. Areas immediately healed but right side of nose and nostril became involved, producing quite serious destruction. Specialist did not wish to disfigure by same radical measures as were used before and recommended X-ray treatment. Improvement followed this treatment up to a certain point and patient was discharged as cured at three different intervals, but each time it recurred with renewed virulence. The Finsen light was brought into use, pressure being produced by the outer lens of the cooling shield to make area anemic. The case was cured under this treatment and there has been no return. The X-ray periods of treatment lasted through eight months; the Finsen light period was only eleven weeks in duration.

Points in Technique:

1. Render parts aseptic and absolutely free from oil and scales.
2. Render parts anemic; free from the red influence of the blood

by pressure with rock crystal lenses or by 1:1000 solution of adrenalin chloride.

3. If areas are raw, or such as may be liable to infection, protect by the use of an antiseptic ointment and cover with sterile lint or gauze between exposures.

4. Exposures should be of such length as to produce a reaction after a period of five days.

5. Sterilize all lenses, instruments, etc., after each treatment.

Finally: Many times we hear the practitioner, tired physically and mentally, cry out for relief and rest, for new thoughts and a new environment, for the fresh air and flowers, for relief from the gravest responsibilities ever given to mortal being; but the discouragement that might be permanent need obtain but for the instant; our new resources will dissipate stagnation and weariness and he will see before him the suffering human family exemplified in one, a being whose every molecule holds a wonderful fascination that spurs his tired energies to renewed efforts, that causes his soul to thrill and his eye to glisten with an enthusiasm that none save God Himself understands. Is there a nobler field under heaven for such a man? It is our sacred privilege and duty to minister to this wonderful structure, our lot to contrive and invent means and measures for its release from suffering. Therein lies the highest service to humanity, and inseparable from that, our own greatest satisfaction.

DISCUSSION

Dr. Hills Cole, in answer to a question, reported a case of probable syphilitic ulceration of the nose in a negro that he had treated for a while with the X-rays with considerable improvement, but the man was unable to continue treatment owing to his inability to leave his work.

Dr. N. B. Delamater said that a professional friend of his had had some experience along this line, and though he had had brilliant results in a few cases, in the majority the results were very uncertain.

The balance of this session was given up to an

X-RAY CONFERENCE

Dr. Hills Cole, in opening the conference as Chairman, remarked that it was not his intention to take an active part in it in the way of relating his experiences; he intended to act merely as a moderator. He wanted all present who had had experience with X-ray therapy to give briefly the salient features of their results and experiences; and in order that some sort of comparison might be made, he asked that those who should speak should mention the instrument employed in generating the rays (whether coil or static machine), the type of tube used, the distance of the patient from the tube, and the length of the individual treatments. No subject had come more to the front

in medical science in the past year than had X-ray therapy, and while it was still in a tentative stage, and few of us were so well grounded in the physics and theory of the subject as to dogmatize as to the nature of the rays or the way in which they acted, or to lay down positive lines of treatment, yet he thought that from an informal discussion, with interchange of ideas and experiences, much good might result.

DR. HARLAN P. COLE exhibited a new X-ray screen of his own devising, consisting of a hollow truncated cone of brass, screwed into a base of the same metal mounted on a wooden backing. The aperture at the large end was about 4 inches, at the small end about half that size. The small end had a flange bringing the total diameter at that end up to 4 inches, so that the two ends were interchangeable. He had been led to believe from his experience with this screen that there was some modification of the rays according to the end used near the patient. When the small aperture was near the patient he seemed to get a stronger effect from the rays, and he had to be very careful lest he set up too much reaction. If, however, he wanted a soothing application, he was able to give one very readily by reversing the ends of the cone. The smaller aperture was provided with screens that slid in grooves, the smaller or larger openings in which enabled him to still further shield his patient from the rays. He had found this of much use in a case now under treatment of a man who had had two operations for alveolar cancer, in whom, at present, the whole roof of the mouth was involved. He had been able by means of this screen to direct the rays on to the growth, and had brought about considerable improvement.

DR. W. H. DIEFFENBACH regretted the absence through illness of Dr. Wm. Harvey King, who, as the result of much experience in X-ray therapy, had come to some very definite conclusions as to this therapeutic measure, which it was his intention to give to this meeting. Dr. Dieffenbach said that he personally made use of a 12-plate static machine, with Mueller, Friedlander or German tubes. He employed the Allen shield with its tubes of varying diameter, supplemented by X-ray tinfoil. The Flower and the Metropolitan hospitals in New York have achieved quite an enviable reputation in this work. From a hundred to 150 treatments per week were given by him or under his direction. He found that of all diseases lupus vulgaris was most easily cured by the Roentgen rays, then came discoid epithelioma, followed by the larger and deeper epitheliomata. Rodent ulcer was fourth on the list; in one severe case they were able to secure granulation after six months' treatment. Schirrus was improved in some instances; and then came in order of cure recurrent carcinoma and inoperable cases. Sarcoma was last on the list, their success with it being very poor; the majority were not amenable to treatment, lymphosarcoma being naturally the most easily affected. In all their cases they made as careful diagnosis as possible, taking cuttings or scrapings for microscopical examination if thought advisable. For deeper lesions they made use of a high tube, for superficial lesions, a low tube. With low tubes were treated discoid epithelioma, epithelioma of moderate

severity, and skin lesions; a case of lupus erythematosus was now under treatment and doing well. An exposure of from 18 to 20 minutes was made at the first sittings, the patient being 6 or 8 inches from the tube; but as soon as a mild dermatitis was developed, the patient was given a two weeks' vacation. When treatments were resumed, they were restricted to 10 minutes. As soon as progress was observed the patient was given a month's vacation; and when he returned it was noticed that a great change had taken place in the interval. Dr. Dieffenbach reported some good results in a case of cancer of the omentum. The abdomen had been opened by Dr. Helmuth and the case pronounced inoperable. Dr. Nielson examined a fragment of the growth and pronounced it carcinoma. The woman had a swollen abdomen corresponding to an advanced pregnancy. After six months' treatment no signs of the growth were discoverable on palpation, the swelling had entirely disappeared, the skin was brown, thick and leathery, the woman suffered no pain, and was now attending to her household duties. All cases were not so fortunate. He recalled a case of cancer of the breast that had recurred three months after operation. Dermatitis was set up within a month, a month's vacation given. By that time ulceration had developed, toxemia set in, with subsequent death. Another bad case was that of a policeman suffering from sarcoma following a kick in the groin. He had tried the plaster treatment without benefit, and was made worse by the Alexander treatment. He was treated at the Flower Hospital with a high vacuum tube; but toxemia developed and death ensued after a period of two months. Another patient who had gone the rounds of all the best known cancer institutions in the country with an epithelioma of the face made no response to X-ray treatment, and died from toxemia. Another case in which toxemia and death were the final results was a woman with a recurrent carcinoma of the cervix, for which a hysterectomy had previously been performed. The rectum was involved, and the growth was as large as an orange. It was treated by a Caldwell tube; but the results were those mentioned. He had learned to be on the watch for toxemia in people of advanced age and in cases of recurrent growths.

Dr. G. R. Southwick used both static machine and coils. He could not expose a patient to the X-rays generated by a coil for 20 minutes without severely burning them. With an 18 or 20 inch coil he began with treatments of 6 or 7 minutes, gradually increasing as the tolerance of the patient was manifested. An X-ray burn was not to be lightly considered. There was a marked difference in the susceptibility of patients. The tubes he used were mostly of the German type, though he had used the Mueller, Friedlander and the Gundlach tubes, the last especially with an electrolytic interrupter. He was able to confirm the wonderful results mentioned by previous speakers; he had seen a large amount of the work done in Europe, and had noted good results from different types of instruments. He was convinced that it was essential to make use of instruments of the best construction only. He had used the X-ray alone, the X-ray and high frequency and the X-ray and the violet ray. The violet ray gives finer cosmetic

effect, leaving the skin more natural; but it requires more time. He had used what was known as the London Hospital lamp. He asked whether, in view of the results obtained, it should not be made a rule for all cases of cancer operated upon to be subjected to the rays for a time to prevent recurrence. Also to what extent were we justified in treating operable cases by the X-rays rather than by operation. Possibly a middle ground should be taken. In slow growing malignant cases, wonderful and remarkable results from the rays had occurred; in rapidly developing cases, it was well to operate to remove the mass, and follow the operation by the X-rays. Also in slowly growing tumors it might be well to ray before operating, to make the surgeon's work simpler. He thought they should always have in mind the personal danger of the operator; X-ray burns had occurred in operators, and cancer had followed. In such a case the X-rays were much less efficient as a means of cure. Then there was a possible danger to the eyes; it had been claimed that the nutrition of the cornea was affected. Another important question to be answered was: Do we need to take unusual precautions in raying a woman in the early months of pregnancy? Pregnant guinea pigs have aborted under the influence of the rays; and eggs that have been rayed have failed to hatch. He had had some excellent results from exophthalmic goitre. Six months ago a young woman came to him with marked tremor, she could not hold anything, the eyes protruded and showed the whites, and there was tachycardia, the pulse being 160 when it was countable at all. Now the pulse was 80, the goitre had gone, she can write well. Other cases have secured excellent results. In his hands rodent ulcer had been very nicely affected. He used tinfoil for a shield; it could be easily sterilized.

Dr. E. Rodney Fiske used a static machine, and lead tea foil as a screen. He thought that if vacations were given during the course of treatment, the patient should be under close observation all the time. He had had a remarkable case of sarcoma, so diagnosed by Coley; it was of the round-celled type and had been operated upon nine times. It had received Coley's toxines, but the growth was not checked. The tumor was of the size of a cocoanut and was located on the neck. Within ten days after beginning X-ray treatment, a decided reaction was noticed, and inside of four weeks the tumor had disappeared and so far had failed to reappear. Numerous small metastases appeared; but they all responded rapidly to treatment. It is now two years since any signs of the disease were manifest. In his treatments he usually employed a 7 minutes' exposure at the beginning; but it was according to the skin of the patient. There was an idiosyncrasy in each patient in that manner; he believed it bore relation to the patient's susceptibility to sunburn, and he always made inquiries on this point before beginning treatment. His cases of uterine carcinoma were invariably unsuccessful, and he sought the experiences of others in this regard.

Dr. N. Perkins said he made use of a Wagner static machine, German tubes and tin foil screens. So far his results had been perfectly satisfactory.

DR. H. P. COLE reported an unoperated case of tumor in the breast, probably cancerous. At first it was of the size of a lemon; but under treatment it had shrunken to a nodule the size of a horse chestnut. Beyond this he was unable to make any progress. In view of this case he asked if it were not possible to destroy the vitality of the cancer cells, causing a shrinkage instead of a destruction, as it were, the innocuous stroma being left behind. In nearly all the cases he had treated he had noticed a considerable improvement in the general health of the patients after beginning treatment.

DR. WILLIS remarked that so far the X-rays had been considered solely in the light of a tissue destroyer; nothing had been said of its ability to repair tissue. He had treated a syphilitic ulcer of the tongue, the whole center of which had sloughed out, leaving a space that would accommodate half of one's thumb. The patient had 22 sittings under the X-rays, each of 10 to 15 minutes' duration. After the first treatment there was no more sloughing, prolific granulation started in, and the new tissue was very nearly normal in type, very little true scar tissue being present. While under treatment the sensation of taste was paralyzed; three weeks after treatment had ceased, sensation returned.

DR. B. T. LORING: In the few years which have passed since the X-ray was discovered, new light has been given on many unknown phenomena, and the intense interest which the entire scientific world is now taking in radium, will doubtless lead to still further advances in the knowledge of forces at present unknown.

The atom, which hitherto was supposed to be the smallest subdivision of matter, has been divided into a thousand parts and without a dissenting voice. Terrestrial and solar phenomena, such as the aurora borealis and gaseous nebulae, have been shown to be readily accounted for by a study of the properties and actions of cathode, ultra violet and X-rays.

If we might from this same source receive light also on how and why drugs produce their effects, the science of therapeutics would have received the greatest accession possible for us to imagine. This I conceive to be not improbable, but possibly only after an enormous amount of study, research and experiment. These remarks, at best only halting and indefinite suggestions, are offered in the hope of arousing thought and interest on the part of others, and possibly to the ultimate discovery of new facts in that great region where at present we are as one groping in unknown darkness.

Several years ago when my hands were suffering from X-r- dermatitis, I noticed that in appearance, they resembled very closely a case of eczema of the hands which was rapidly improving under exposure to the X-rays. The subjective symptoms were also very similar, and the thought at that time occurred to me that so far as eczema was concerned, the curative effect of the rays was apparently homeopathic.

It was but a passing thought, and it was not until I had two cases in which a papulo-pustular eruption which could not be distinguished

from acne vulgaris, appearing over areas exposed to X-radiance and nowhere else, in persons with a clear, fair skin, that it recurred to me at all.

It then appeared to me to be only a coincidence that X-rays would cause and cure conditions similar to eczema and acne.

When, one by one, reports were made public, of epithelioma, carcinoma and pre-cancerous keratitis on section diagnosed as epithelial carcinoma, appearing in persons frequently exposed to the X-rays, my previous thoughts were more forcibly recalled, and some little time given to considering whether or not the law of similars was the law by which the X-ray cured. Some months ago when several cases of enlargement of the thyroid gland were under my care, the right lobe and isthmus of the thyroid of a patient being treated for tubercular cervical adenitis of the right side of the neck, became considerably enlarged, but subsided quickly on stopping the X-ray exposure.

This, added to my other cases, seems to me to warrant the inference that the chance of its being due to a series of coincidences is very small indeed. If not a set of coincidences, is it not a new proof of the truth of the theory enunciated by Hahnemann? Practically to the patient the question whether this be fact or fancy is of little moment. So long as he is cured, it matters little to him whether it be by the known law of similars or by empiricism based on practical experience.

To us, as homeopaths, however, it is a matter of more than interest and curiosity. If true, it is an increase in our knowledge, and as rational an explanation of the method of therapeutic action of the X-ray, as we have of the action of other curative medicinal agents.

The fact that some of the conditions, as acne and lupus, are known to be of bacterial origin is not therefore a proof that the action of the ray is not homœopathic. I do not wish it understood that I am certain that it is homœopathic, but to call your attention to the fact that the X-rays cause objective and subjective symptoms similar to those of the diseases they are most useful in curing. Allow me to go more into detail. The symptoms noted have been within the scope of my personal observations, and, it is hoped, can be verified or amplified in the experiences of others present.

Neuralgia.—Have had several cases where each exposure was followed by neuralgic pain in areas exposed. Have had many cases where pain of neuralgic type was temporarily relieved, following each treatment.

Goitre.—One case of enlarged thyroid due to exposure to X-rays has been quoted. Several cases of goitre, one exophthalmic, have been greatly helped.

Acne.—Two cases, a man and a woman, had an eruption over areas exposed, indistinguishable from acne vulgaris. Have treated acne invariably with success.

Eczema.—Redness, scalding, itching and burning have come under my notice on the hands of many X-ray workers. Have treated acute and chronic eczema successfully.

Psoriasis.—Have seen one dry, scaly itching eruption induced by X-rays. Chronic psoriasis greatly and immediately benefited in every case which has come under my observation.

Lupus.—The ulceration caused by X-ray is indolent, painless and persistent. Have had no case of lupus which has not healed, however long in history.

Epithelioma.—Have seen one case where amputation of parts of fingers was required by epithelioma, caused by X-rays. Have never had nor seen a case of epithelioma which did not heal under X-ray treatment.

It is my belief that none of these symptoms or results were due in any part to suggestion or auto-suggestion, but to the conditions induced by the action of the X-rays.

More experience and more time will corroborate or disprove the theory advanced. I at least bring the theory before you, and make it a matter of record, if not of interest.

PROGRESS IN ELECTRO-THERAPY DURING THE LAST YEAR

THEO. C. WIGGINS, M.D.
BROOKLYN

Though there may be nothing absolutely new in electro-surgery during the last year, uses for the different currents and the methods of applying same, which have not been generally known, have been tested by careful and competent observers and are taking their proper places as agents in the cure of disease.

One of the things which has passed beyond the experimental stage is mercuric cataphoresis, which was first strongly advocated by G. Betton Massey, M. D. The profession has been slow in adopting this method, especially in vaginal work, because of the irritation set up and the frequent cessation of the menses for a month or two. Some fear the absorbing of mercury. The discomfort Dr. Massey relieves by the Faradic current; the menses return when treatments cease; and he affirms that no general mercurialization results.

Dr. W. L. Heeve, a fellow-townsman, recently told me of a case of epithelioma on the face which he had rayed a number of times. It improved to a certain point and then stopped. The patient became discouraged because of the time spent, and was about to see a surgeon. Dr. Heeve induced him to submit to a treatment by mercuric cataphoresis, following Dr. Massey's instructions. Six triangular pieces were cut from a sheet of zinc, each two inches long, about one-half inch wide at larger end, and going to a point. No. 28 insulated wire was attached to the larger end. The zinc was then insulated with black sealing-wax to a half inch from the point. This was dipped in dilute sulphuric acid and then in quicksilver.

Each zinc being thoroughly amalgamated, the ends of the wires were joined and attached to the positive pole. Two pads, 4x4, were placed on the right side of the body, one on the abdomen, the other on the back, and connected with the negative pole. The six zincs were inserted into the margins of the growth and the current applied for a half hour, beginning low and gradually running it up to 80 ma, where it was held for twenty minutes. Seven days after a slough came away, leaving healthy tissue behind, which he is

now raying to obtain a softer scar than would come from the cataphoresis alone.

The brush discharge, as applied by Dr. William Benham Snow, is of great value in many conditions, and is rapidly growing in favor. Two years ago I heard of his curing lupus with the discharge from a wooden electrode. He has since experimented with different kinds of wood and finds that best results are obtained with a handle of white wood twenty inches long, three-fourths of an inch in diameter, into the end of which may be fitted a wooden ball or such other terminal as seems desirable. An article on the modality appeared in March number of "Advanced Therapeutics."

Dr. Snow told me of a patient being treated for paralysis who came one day with what he called a more serious trouble. Dr. Snow diagnosed acute appendicitis and advised operation. The gentleman refused to submit to the knife, so the Doctor applied a strong brush discharge from a wooden ball until he had made thoroughly red a band about four inches wide extending from the linea alba to the iliac spine. The patient was relieved of pain except on deep pressure; was sent home to flush his bowels and directed to take castor oil. Slept well all night. There was more tenderness on deep pressure next day, but he took another treatment and went to business. The third day there was no tenderness.

Vacuum glass electrodes are frequently referred to in the Journals. As they can be utilized with either the high frequency coil or static machine and are so efficient in inflammatory or catarrhal conditions in any part of the body, and, when properly applied, are so devoid of unpleasant features to the patient, they are coming into more general use. Applied with a static machine the patient should not be insulated, for the tube will soon burn out or become punctured if the current is strong.

The Morton wave gives very gratifying results applied to one lying on a couch or seated in a chair, not insulated. I frequently combine the two treatments, putting the plate connected with the machine over the solar plexus, spine, or any part of the body desired, and using a vacuum tube in vagina, rectum, on the chest in case of bronchitis or more serious disease, or over any painful spot, connecting the tube by chain to the standard, thus giving an indifferent grounding. The effect is often unpleasant if connection is made with the earth direct, and the result to the tube may prove fatal.

One evidence of progress lies in the fact that many more physicians are interested in Electro-therapeutics than ever. Numbers

are putting in electrical outfits. Those longest in the field are endeavoring to perfect themselves, striving to obtain best results, and are individualizing their cases, and giving the appropriate treatment, rather than following mere routine. Increasing numbers are taking special courses; the attendance at clinical conferences is greater; more good articles are appearing in the Journals, general and special, and are better read.

Though much can be accomplished by electricity, we are learning that it has its limitations and will not do everything.

Those having static machines for show purposes only, or who confine themselves to spray, spark, and crown breezes are in the minority. The public are becoming well informed and demand results, and those who pay attention to details and become proficient are the doctors who will get reputation and have the business. The keener the competition, the more scientific and efficient those at the top must become. There will always be "plenty of room up stairs."

DISCUSSION

HILLS COLE, M. D.: I would like to ask Dr. Wiggins if he has had any experience with the high frequency electrodes from which the air has not been expelled, that is non-vacuum tubes—plain glass. I mention this because I have just returned from a trip across the water, where I was giving special attention to this work and found that many were using a small glass electrode, filled with a fluid—water usually—in which a little wire was placed, also a similar glass tube containing no water, but from which the air had not been expelled.

T. C. WIGGINS, M. D.: In reply to Dr. Cole, I would say that I have not had any experience with such a tube—that is, a tube which is not a vacuum tube. If you use a metal running the full length I think you will get the same results, and I think you can have rubber if you want to. You can use a cathode having metal inside; but it should be impervious, for if it is not, you will find the current escaping through the holes. I think you will get the same result, whether you use one tube or the other.

HILLS COLE, M. D.: I would like to ask if the high frequency current from a coil is as satisfactory as one from a static machine.

DR. WIGGINS: I think it depends on the kind of coil you use. My experience so far in these cases has been with the alternating current. I find the static machines are very much more powerful and that the vibrations are more energetic; with the coil the current is very smooth and you can use the vacuum tube from the coil on the forehead with no unpleasant results. The results, I think, are as good with this form

as with any other. If the static machines are not grounded we get nearly the same results, but with them grounded I am quite sure the current is not so effective in such conditions.

DR. COLBY: I would like to ask Dr. Hills Cole if he saw the application of the tube with the fluid?

HILLS COLE, M. D.: Yes, I saw it several times in the clinics while I was over there.

DR. COLBY: Then was there any difference to the eyes in the color of the rays as administered? Whether the ray is blue, as when a vacuum tube is used?

HILLS COLE, M. D.: It looked about the same to me.

DR. COLBY: About the same color?

DR. COLE: Yes, you get that bluish color that appears with any tube; and there was no difference when different chemicals were used. It did not seem to change the character of the rays.

GEO. R. SOUTHWICK: May I not inquire if the type of interrupter does not make a material difference in the character of the high frequency current obtained from the coil? In my experience an interrupter giving a long contact is much better than one with a short contact; that a large coil giving a fat spark is preferable to a small coil, or one with a thin spark. I think an interrupter a very important factor in using coils for high frequency.

DR. WIGGINS: In reply to Dr. Southwick's question, I think there are coils, and coils; and the success obtained with any coil depends upon the ingenuity of the operator. I do not know anything about the construction of coils, but I have certainly had much better results than we do when giving the current in such strength that it irritates the patient.

DR. O. O. HOWARD: I do not seem to see a place where to report a case I want to very badly, without interfering with some other member. But I do wish to speak about a case of ex-ophthalmic goitre that I have been treating with the high frequency current for about eight months, with apparent cure. It was a case which had been condemned and was going on to one of the more modern forms of treatment, operation, as being absolutely hopeless. It had the usual two legs to stand on, and a vestige of a third. There was tachycardia, goitre, the weakness combined with a certain amount of tremor. It was ex-ophthalmic goitre all right; and after eight months' treatment with the static high frequency, it has so entirely disappeared, that is the goitre has, and all the symptoms other than that, that it is only possible to recognize it by watching very closely, or placing the finger on the site of the enlarged gland; it is enlarged perhaps a little now. The expansion of the chest is also improved from only a mere trifle over an inch to two inches and this without any inspiratory exercises at all. The treatment was given from an old machine I have had for

about twelve years. I keep it because I will never get another one that will stand me through all weathers as that has.

Electricity we have all of us applied in ex-ophthalmic goitre; undoubtedly most of us, at any rate; but we are obliged so continually to watch that we do not make it offensive to the patient; that is to say, that we are not causing, when we place the electrode under the angle of the jaw, vertigo or nausea or faintness. Now with any current that I have given with this apparatus I never have had the slightest discomfort complained of by the patient; and yet this case has gone on more rapidly than any case I have ever used electricity on before, although it is the only one of this kind. My usual period of administration is five minutes; two minutes here under the angle of the jaw, and three minutes over the goitre. An electrode was used and a glass vacuum and applied closely to the surface; monopolar.

PUS IN THE PELVIC CAVITY CURED BY ELECTRICITY

A. LENORA WHITE, M. D.

NEW YORK

Since the application of electricity in the treatment of disease has advanced during the last few years with such strides, I feel no little hesitancy in presenting so uncomplicated a case for your consideration. But as each specialist enthusiastically reports the successes of his specialty in the same class of cases as his confrere, I am emboldened to enter the ranks and record this simple history of what I am pleased to consider a cure by electricity.

Mrs. X. came to me in November, 1902. She gave a history of pain and tenderness in the left iliac region, which had its acute stages and its exacerbations. She had reflex headaches, nervous tension across the forehead and a constant pressure at the base of the brain, and she said she thought she would go mad if she did not get some relief. These pains usually came a week before menstruation. The latter had become very variable in color, duration and consistency. When the pains began they were sharp and lancinating, and always accompanied by intense burning. She declared she could feel the difference in the temperature of her side by placing her hand on the skin. When the acute pain ceased there was a feeling of fullness and tension in the left iliac region, always exaggerated by walking or standing. This disappeared as a thin, watery discharge simulating the menses, appeared, accompanied by contractive pains. The contraction and the resultant discharge gradually became opaque and thick and then ceased as the menses appeared. During the entire period there was soreness and tenderness, anorexia and fever, which latter ranged from 99 degrees to 101 degrees. The fever decreased with the cessation of the discharge. Two weeks of every month she was confined to her room and couch. One week of each month she was getting ready to menstruate, two weeks she had a discharge, and the other week she was recovering from the discomforts of her menstruation. Altogether the price paid for living was dear.

There was no constipation. The appetite varied in direct ratio with her condition. This state of affairs had existed for six months. The physical examination showed a large hypertrophied uterus—the tissues were soft but infiltrated—the uterus was right altero-laterally flexed—and there was considerable shortening of

the ligaments on the right, and the accompanying tension on the left with a large thickened, distorted and distended tube. The right ovary lay posteriorly to the uterus, and was slightly sensitive but not enlarged. There was extreme tenderness in the left side and in the body of the uterus. I diagnosed a pyosalpynx of the left tube and, chronic endometritis with displacement. The examination caused her increased discomfort and burning. I ordered hot douches twice a day with Seiler's Antiseptic Tablets—this was not well borne. Then I tamponed with a 10 per cent ichthyol and glycerine mixture. The tampons gave so much pain when the glycerine was absorbed the patient had to remove them. I then ordered the patient to bed, and had the nurse apply hot stupes every four hours, consisting of oil of turpentine, one dram; spiritus frumenti, four ounces; water, one pint.

I had this applied just as hot as the patient could bear, by wringing out a flannel cloth and covering the entire pelvis, then placing a piece of oil silk over the flannel, then cotton in layers, and finally a bandage. This was left on for four hours and renewed night and day. Her bowels were kept freely open with high warm salt enemas, two ounces of the salt to the pint of water. The third day there was considerable discharge of thick, yellow pus. The tenderness had passed away and a physical examination gave her no pain. I discontinued the applications, then dilated the cervix gradually; using the graded dilators, and following each dilation with the use of an ichthyol gelatin pencil, and 10 per cent ichthyol tampons every third day.

The discharge increased. These were tolerated nicely, but the acute condition gradually subsided. The patient was able to come to my office at the end of two weeks. During this time the discharge of pus had continued intermittently. Upon examination I found a distinct depression in the place of the whipcord distension, and no sensitiveness. I continued to treat her with the tampons until her next period, which she passed with less discharge and almost no pain, but she still had the recurrent discharge of pus from the uterus.

Having established a free drainage from the affected tube, I determined to try electricity for a cure. I commenced with mild faradization, using the long bipolar electrode in the vagina. The sittings were had every third day, and the duration lasted from five to fifteen minutes. I continued to use the ichthyol tampons and under this treatment there was no return of the pains or profuse discharge. I continued these seances until the next menstruation.

There was little or no further change in her condition under continued faradization. I believed now that the subacute condition would tolerate galvanism, and I changed the treatment. I gave five minutes to the galvanic treatment; I used the large wire woven electrode over the abdomen, the positive; and a small ball electrode, the negative; in the vagina pushed well up into the depression of the once distended tube. I used fifty milliamperes at the first sitting—and gradually increased them, using as high as 100. I never used any higher current in this case, but I will not tire you with the details of the treatment familiar as the a b c's, to the electrician. At the end of the first two weeks, although the patient did not have any localized pain, there was still discomfort enough to keep her dreading any return of her former condition. Gradually the tissues softened around the seat of the old abscess, and returned to their normal condition. At the of two months there was no further suppuration in the tube, and menstruation became normal and painless.

I ceased all treatments for a month, but ordered the medicated douches continued every night and morning. The patient used a gallon of hot water now with each douche. The indicated remedy was always used.

The return of the general nutritional and restorative processes terminated the need for further treatment.

I know I am giving a little ancient history, especially in view of the recent improvements in electro-therapy, but every cure makes history. The indispensability of both the galvanic and faradic apparatus is a record of the past. And now that the technique of the third great electrical instrument is understood, and the constantly increasing methods of its application in disease are demonstrated year by year in a thousand every-day cases, the practical value of electro-therapeutics is yet more strongly accentuated and impressed upon the minds of the general practitioner.

The successful application of any kind of electricity depends on the personal ability of the operator and the idiosyncracy of the patient. Good results in diffcult cases can only be had by the physician exercising his experience, judgment and skill to determine what modification is called for by the indication in each individual case. This accounts for the skepticism of many physicians. When the patient presents the condition which electricity favorably affects, the results are many and easy. The theoretic range of the therapeutic indications for electricity is nearly as wide as disease itself. The results attributed to therapeutic elec-

tricity are neither invariable nor absolute, but depend upon concomitant conditions; and the physiological effect upon any given case will be modified by the individual idiosyncracy of the patient and the knowledge and ability of the operator and the sine qua non of all treatments—a correct diagnosis.

DISCUSSION

HILLS COLE, M. D.: May I ask the doctor a question? There are a good many of us using electricity quite frequently; many not quite so frequently, and for the sake of all, it would be well in all papers in which we are reporting cases to specify clearly the kind of apparatus used, and the method of its use. This particularly for use in reference to these cases in our future work. It would be well to state for the edification of the members how long the treatment was continued; which electrode was placed in the vagina, whether negative or positive, what coil was employed, and what kind of battery used. These are the points I want to call out from the doctor when discussing her paper.

DR. WHITE: I simply use the ordinary faradic batteries, single cell, and primary coil, and use it just as it comes from the manufacturers, just the ordinary dry cell.

DR. FLINN: The reference to pus in this case in the left ovarian region calls to my mind a case. I was called in consultation by the doctor in charge. He had decided to operate and remove the diseased tissue, but the patient refused. The doctor referred the case to me, as he knew nothing about the use of electricity. When I was called the temperature ranged from 100 to 103 degrees for forty days; she had chills, fever, pain, and a general disturbance of the whole body, and intense pain and soreness in the side in which the difficulty existed. I treated the case for some six weeks, the first few weeks every day. I think I used a coil of No. 24 wire 200 feet in length, and 300 feet of 32, joining these two coils into one. This patient was under treatment for thirty days. The pain subsided somewhat with the first treatment, returning after a half hour. The next day when giving the treatment I placed the electrode just opposite the seat of pain, which was mostly in the left side, passing the current through my hand, for the part being very tender, she could hardly stand any pressure or touch. The next treatment I placed the negative pole in the vagina and put the hand over the bowels. This form of treatment was kept up until the pus seemed to be absorbed and the thickened tissue dissolved, as I could find no enlargement. She felt well for about eight weeks, when there was a little return, a little swelling coming again in the left side, and the treatment was resumed for a short time. The patient fully recovered and is now all right. I believe that many times we fail to get good results from the use of electricity because we do not use long enough wire.

E. B. HOOKER, M. D.: I would like to ask those gentlemen who have cited experiences what is the effect of electricity applied in moderation in cases of this character, that is, X-rays in those cases in the

first stages of inflammatory processes before pus forms? I am interested in getting comparisons of methods employed in such cases.

T. C. WIGGINS, M. D.: I have had considerable experience with inflammatory conditions, particularly those which have not gone on to pus stage, and these have been treated by the vacuum tube. The tenderness disappeared promptly, very promptly, and the inflammatory deposits, if there were any, faded away. I have had this year a number of cases similar to the one reported by Dr. White. There was one that I was very much interested in, and that was a case which had been diagnosed as a case of chronic appendicitis, which discharged from the rectum at certain intervals. Ordinarily the case was practically without pain, although at certain periods the pain would be very intense until a profuse discharge would set up, coming from the rectum, when the pain would subside. I found by using a vacuum electrode, getting my application before and behind the seat of inflammation, the patient realized some comfort after the first treatment of twenty minutes' duration. He was allowed to take more frequent treatment than is generally suggested, and his condition improved right along. Another case of somewhat similar nature, an old lady, treated in the same manner; I found that this patient improved for a few treatments, but whether the trip to my office was too far or the pain was too severe, she did not return, and I have heard nothing more of her.

W. H. DIEFFENBACH, M. D.: Whenever I have diagnosed a case of pus I have turned it over to the surgeon. Pus in any portion of the body calls for removal, and the appearance of pus takes the case outside of the field of electricity. In my opinion the doctor ran a great risk of setting up peritonitis. Every such case should be immediately placed in the hands of the surgeon or gynecologist. For the pus formation, or rather the cause that lies behind its formation, electricity properly exhibited may prove very beneficial in preventing any further formation of pus. I do not wish to criticize the doctor too freely, but to offer a word of caution: She cured the patient; that is sufficient; but I doubt if it can be used successfully in all cases, and I should dislike very much to trust a case where pus exists, to this form of treatment. With regard to the use of X-rays where pus exists, I noticed an article in a recent number of a journal where a case of chronic gleet was reported cured by its use. I tried the X-rays in a number of cases and had the satisfaction of seeing the discharge stop. The pus corpuscles and gonoccocci disappeared from the urine. The X-rays act on the tissues, producing a mild leucocytosis, in this way preventing a further formation of the pus-producing germ. If, however, I had an abscess of some portion of the body, I should be very reluctant to use any electrical measures, and would undoubtedly turn over the case to the surgeon.

DR. HOOKER: Supposing the case had come to you before going so far as having pus form, how would the X-rays act in such a condition?

DR. DIEFFENBACH: Before pus is formed I should not hesitate to use the X-rays. I believe it would prove beneficial in such cases, inducing stimulation of the circulation. We have noticed that action of the X-rays in the dermatitis which sometimes follows a long exposure. In cases of lung trouble we have found the blood corpuscles on examination show a decrease in the leucocytes, but when a case has been treated for some period of time the leucocytes through the action of the X-ray on the tissue are increased. So we can figure the physiological action on the tissues, that they are improved through the stimulating action of the X-rays.

A MEMBER: Do you discriminate in regard to the kind of a current you use in these cases of pelvic inflammation, before pus has formed?

DR. DIEFFENBACH: I use electricity in these cases by placing one pole, one electrode, in the vagina and the other on the surface of the body over the seat of the inflammation. It appears to work as well with one kind of current as with another. The only thing needed is that one should understand its use to secure good results. We can by stimulating the tissues through the lead glass set up marked changes and in some local processes produce marked improvements by absorption of the exudate of the inflammatory state, although I aim in most of my cases to use the high frequency current, it is not absolutely essential to a cure. Of course, it is understood that I am speaking of the use of electricity prior to the stage of pus.

DR. COLBY: I would like to ask whether the X-ray power does not lie in its germicidal properties rather than in its power to increase the leucocytes?

DR. DIEFFENBACH: There is quite a difference of opinion as to the value of the X-rays in the destruction of germs. The English investigators claim that experiments made by them prove it has no germicidal properties whatever, while on the other hand the professors in Munich who have been experimenting along the same lines state that it has a decided action on bacteria. Personally I have tested the effect of the current upon the typhoid bacilli and other micro-organic forms and have found the germs motile in ordinary exposure, but when holding the culture tube in front of the X-rays I have found, after an exposure of a few minutes, that the germs were immobile, largely. Some of my friends who have made thorough experiments along this line are positive that the X-ray has the power of killing the germs. Prof. Reed, who is quite an authority on this subject, took a plate and covered it with lead foil, leaving an opening in the foil which he covered with black cloth. Then he sent the X-ray current through the opening of his lead plate. After having done that for a short time he tested the vitality of the germs exposed, the colon communis, the tuberculosis bacilli, the typhoid, etc., and found those germs which were in the field protected by the lead sheet were not affected, except a very few, and these but slightly, while in that portion covered by the black paper the germs were practically destroyed. An attempt to make a

culture from the germs exposed was carefully made, but it was found they would not grow. From such an experiment we believe that proof has been obtained affirming the germicidal powers of the X-ray.

I have seen in a recent issue of a journal that some experimenters make the claim there is no effect whatever; but personally I am of the opinion that it has a very decided action upon all germ life.

GEO. R. SOUTHWICK, M. D.: I think the powers of the X-rays as a germicidal agent would depend somewhat upon the length of time they were exposed to its effect. We know that it possesses great powers, and very few of us would like to expose ourselves to a powerful current for a very long time. Another thing is making these experiments, and the reason why there is such a difference of opinion as to its effects, lies in the different distances from the tubes the culture medium is placed, and this has a large influence upon the germs.

I think, ordinarily speaking, that we can expect but little from the germicidal effect of the rays in the treatment of any diseases, as such, and that its action for good depends, as one speaker has suggested, upon its stimulating action. In doing this it increases the resistance of the body, building up the vital forces, thus rendering the body immune, and the germs that are present in the body at any time die of their own toxines. In regard to its employment in suppurative conditions, I do not believe, with our present knowledge, that we are justified in using the X-rays as a therapeutic agent in pyo-salpinx or any other disease of like character. If we stop to consider the distance we must place the tube from the body, plus the tissue that lies between the pus and the tube, also the bony structure that supervenes between the rays and the pus, we must realize that its opportunity for destroying germs is very slight. I have not much faith in it at least.

I have seen some very good results in some other cases even when suppuration was going on, and especially in tubercular glands of the neck; but in these case it is easy to apply the ray in close contact. I have seen a case recently where the patient had a tuberculosis sinus in the ankle joint. This condition when affecting the joint is serious, as we realize that sooner or later it is likely to reappear and destroy life. This case was treated with the X-rays and its use was followed by steady, progressive improvement, until perfect recovery had been obtained. This case has gone a period of three months since the last treatment, and as yet has shown no return of the trouble and the discase is apparently completely cured.

As to the use of the X-rays in cases where pus cavities are formed, I must agree with the speaker in his statement that whenever we have such a case under our care it is our duty to cut down and secure drainage, and not risk the life of our patient by this treatment. It is always the wise thing to do to evacuate pus wherever and whenever found.

I am inclined to expect more from the X-ray in those conditions which lead up to the formation of pus, before pus appears, than I do after such conditions have set up.

A. LENORA WHITE, M. D.: I quite agree with the Doctor in his statement that where there is pus pent up, it should be evacuated and

thorough drainage given. But I told you in my paper the patient had drainage through the vagina and consequently there was no danger in using the treatment that was used in the case. Furthermore, this patient absolutely refused to undergo an operation of any kind and unless something could be done for her with electricity she would not be treated. I am pretty certain that I would hesitate to take a case where pus had formed and treat it with electricity, or in any manner, as far as that is concerned, unless there was drainage established first. But in this case no risk was taken on that account. The patient recovered from her serious condition and I reported the case because I felt it to be of interest to those who are using electricity in their daily work. So far as the necessity of relieving pus wherever found, I feel there is no difference between the disputant's opinion and my own, and so I bow to the Doctor.

TREATMENT OF CONSTIPATION WITH HIGH FREQUENCY CURRENTS

WILLIAM H. DIEFFENBACH, M. D.
NEW YORK

The treatment for constipation has always been a fruitful source for medical discussion and the methods for combating the condition are varied and numerous, including within their scope nearly all medical procedures. We find constipation cured with drug-therapy, with electro- and hydro-therapy, with massage and physical exercise, with diet and hygiene, with mechanical therapy (including dilatation of the sphincters) and lastly with suggestive therapeutics.

I doubt not but that every member in this room has some favorite method for treating this bane of modern civilization.

Omitting the recitation of the etiology and varieties of constipation, we will proceed at once to a description of the treatment I have employed for the past two years with such excellent results that its general adoption seems desirable. Like many new methods in medicine, the application of the high frequency current in the treatment of constipation was somewhat accidental. I was treating a case of chronic prostatitis through the rectum by means of glass vacuum electrodes and the high frequency current (a method, by the way, which is efficient in a large percentage of cases) when the concomitant constipation the patient had been suffering from was ameliorated in such a marked degree as to attract attention. Being aware, at the same time, of the claims of the French electro-therapeutists for the D'Arsonval current in constipation and hemorrhoidal affections, I resolved to try the method on the next case of chronic constipation which presented itself and determine its possibilities.

The case was one of thirty years' standing, with a history of constant drugging during that period. The patient presented a perfect picture of atonic constipation complicated with hemorrhoids and a condition of general mal-nutrition.

Suggestions regarding diet, such as the eating of fruits and the drinking of abundance of water between and somewhat before meals, Lawson Tait's rule of regularity of habit—i. e., having an evacuation of the bowels at the predetermined time to the minute; proper exercise and bathing and other well known procedures were prescribed as measures of value in the condition. These points having been thoroughly discussed with the patient, he was conducted to the operating room

and placed on an adjustable chair in a horizontal position, face downward. The clothes were arranged and one of the small glass vacuum electrodes chosen, well lubricated, and inserted into the rectum. The insertion is frequently accompanied by some pain, especially if hemorrhoids are present, but a short time after the passage of the current the pain rapidly disappears. The electrodes should be introduced slowly, and should pass the sphincters, if possible. Several treatments are sometimes required before this end is accomplished, and the contraction of the parts is remedied. The electrode is then attached to the handle and connected with the high frequency apparatus. The apparatus I employ is the Piffard Hyper-static, connected with a 12 plate Ranney-Wimshurst-Holtz machine. The sliding rods of the static machine are slowly drawn apart until the desired spark is obtained—usually about one inch—and a monopolar high frequency attachment is made, the static machine being run at full speed. Treatment should last fifteen minutes and daily seances are advised at the beginning until improvement sets in, when tri-weekly or bi-weekly treatments are sufficient until permanent results are obtained. In the cited case, ten treatments were required before a normal passage was secured, the patient using enemata in the meantime to produce evacuation. No medicine of any kind was used in this case, as I desired to test the treatment on its electrical merits alone. Subsequent cases received, in addition to the other measures, remedies indicated by the symptoms, Nux Vomica, Opium, Natrum Muriaticum and Plumbum being the most frequently prescribed. The electrodes used at the beginning were straight with no grooves or curves, but experience has suggested changes which were incorporated in the last lot made for us and of which I will show you specimens. The tapering point admits of ready introduction, and the grooves permit more vigorous action of the current as the mucous membrane cannot close too snugly about it. The case is usually started with the three-fourths inch electrode, sometimes the one-half inch electrode is necessary, and the size is increased after four or six treatments, thus inducing gradual dilatation of the anus, rectum and sphincters. If sphinctero-spasm and sphincteralgia exist the pain and contraction disappear after several treatments; fissures are also amenable to the violet spark. Hemorrhoids, if present, are in many cases markedly diminished in size and in several cases have absolutely disappeared, so that I now employ this treatment for hemorrhoids also.

In several cases where the portal circulation was at fault, persistent treatment over the hepatic area by means of the Morton wave current for fifteen minutes subsequent to the rectal treatment assisted in accelerating improvement.

We may tabulate the various agents entering into the successful technic of this treatment as follows:

I. SUGGESTION. All applications of electricity, if properly given, act upon the mentality of patients in a very impressive manner. During the fifteen minutes while the current is passing and the patient is relaxed, resting quietly with the mind in a receptive state, the operator can repeat his instructions regarding regularity of habit, the drinking of abundant water, the ingestion of laxative fruits, indulgence in physical exercise and bathing and other points of value, daily repetition of these suggestions creating fixed thoughts in the patient which are not easily forgotten. This feature has been of much value in producing the earnest co-operation of the patient and no doubt assists materially in the ultimate success of the treatment.

II. STIMULATION. The high frequency current acts directly on the mucous membrane and the tissues surrounding it and produces with marked stimulation of the local circulation muscular contractions, as is seen in the disappearance in some cases of persistent hemorrhoids. The general circulation is also acted upon in a mild way, and if the Morton wave current over the hepatic area is added to the rectal treatment, marked general circulatory improvement will be noted.

III. DILATATION. The gradual dilatation of the anus, rectum and the sphincters in many cases removes the cause of constipation and if it is combined with the high frequency current, this process is absolutely painless, as the current is markedly analgesic. Care must be taken not to dilate too quickly, the size of the electrode being changed only after a number of treatments. I can call to mind one case in which over-dilatation of the sphincter when the patient was practically well produced a relapse which it required a number of treatments to overcome.

IV. REMOVAL OF THE PRIMARY CAUSE. Many cases of chronic constipation being due to hepatic disturbances with hemorrhoidal complications, the amelioration of these conditions will naturally be followed by normal evacuations. In cases of atonic constipation with almost absolute lack of peristalsis, the constant passage of the mild high frequency current acts as a tonic, and induces improvement through gentle contraction of the muscular coats of the intestines. The cure of sphincteralgia, sphinctero-spasms and fissures of the anus following the application of the violet spark also removes a frequent cause of constipation.

V. THE REGULATION OF HABIT. Drinking of abundant water, massage of the abdominal muscles, active exercise, abdominal cold water bandages, dietary regulations and the indicated similar remedy are all

called upon to assist the above measures in the cure and all contribute to a successful issue.

In closing I will say that I have employed this treatment for the past two years in a large number of cases and have yet to meet with failure. In treating females I desire to warn the operator not to give the treatment too close to the menstrual period, as the stimulation of the parts will bring on a premature flow. Having had this experience in several cases, I utilized this fact in the treatment of delayed menstruation, dysmenorrhoea and amenorrhoea with gratifying success in some cases. This method is especially to be recommended in virgins where vaginal manipulation is not desirable. The uterus being located in such close proximity to the rectum receives marked stimulation through the current and treatment in cases of females must be regulated accordingly.

DISCUSSION

THEODORE C. WIGGINS, M. D.: I have had considerable experience along this line, combining different currents in the treatment of constipation; and in addition to that using the Weirick rubber dilators to bring the muscles of the lower bowel into proper action. I begin with the small dilator, there are three sizes of them, and sometimes go up to the third size at the first treatment. I place the plate over the solar plexus and insert the electrode in the rectum. I use hard rubber dilators to bring the sphincter muscles into proper action; carry up to the third size in the first treatment if I can; and after I have done that I place the plate over the solar plexus and have it extending somewhat over the liver, and then use an electrode in the rectum. I can see an advantage in these corrugated electrodes. I have used one of the same shape as the Weirick dilator made of glass and protected by a glass rim, so that no spark is given off to the buttocks. I often use the plain vaginal electrode. I have recently had a case that interested me a very great deal. A patient who had been suffering many years with spasm of the muscles of the back, so that the head was pulled over, and I think for seven years she had not been able to see the sidewalk. In addition to that there was a continual shaking of the head. She had had orificial surgery performed, and had been on osteopathic treatment and had suffered most everything at the hands of very many kinds of doctors. She was sent to me from a sanitarium where she had had the orificial work performed. I was wondering if I could accomplish anything with the high frequency current applied to the muscles of the neck. It seemed to me that the cause of the trouble was not there. I learned that she was tired of the high flushings and had had her last one, and what she was going to do next for constipation she had not decided upon; but I directed her attention to that and I used the dilators, as I said, and applied the plate over the abdomen, and after I had given her about fifteen minutes of that treatment I just passed the flat electrode over the muscles of the neck for a few minutes. The next day she came and reported that she thought I had gotten on the right track. I saw her

four times after that, before she left the city, and each time she brought me evidence of improvement.

Another case, not so serious as that, is a young woman who had been constipated and had not had a natural movement for a year. I treated with the plate over the abdomen and the dilation of the rectum with electricity, and the next day she had a natural movement and continued to have every day with the one treatment.

I believe a good deal in the suggestive idea that the Doctor speaks of. I think the same result is obtained if you should talk on Delsarte or any other subject. If you get your patient relaxed and then pour into their ears these simple things that will keep them in proper condition; that is a great factor in itself. But in these cases I have in mind I think no suggestion was given particularly, and I am sure in the case of the woman with the muscular contraction she had no confidence in the treatment, and I did not have enough to do any very pronounced suggesting on the subject; but the electricity, I am confident, was the agent which helped in that case, and I believe we have a very efficient agent for those cases in just this treatment. The stasis is overcome, as the Doctor shows, by the disappearance of the hemorrhage; the fissures are cured; and the circulation is re-established. It is one of the very best treatments for this obstinate and far-reaching malady.

CLARA EMERETTE GARY, M. D.: I have very little to say on this subject. I wish I had brought with me the electrode manufactured by Dr. M. Cushman Rice, which I use in static surgery. I was not in when the paper was read, so I do not know whether it has been brought up, as it has been mentioned. It is a small, copper electrode, which is introduced while the patient is sitting on the stool, using static electricity. It is very efficient, especially after four or five applications; perhaps the first time there will be very little difference noticed in the condition of the patient. I have tried it on but four cases; the first one especially was a brilliant success. She had been very constipated for years and had used all sorts of cathartics; she came to me last January and she tells me she has never used any cathartic of any kind.

HILLS COLE, M. D.: I would like to ask Dr. Gary when she speaks of static surgery, just what she has reference to. Do you short-circuit the balls and give a pulsating current?

DR. GARY: Yes, sir; a pulsating current.

EDWIN A. COLBY, M. D.: The relief of proctalgia seems to be one of the by-products, and the Doctor is worthy of a great deal of credit. I think a man who has succeeded in relieving one or two cases of proctalgia is deserving of a monument almost as high as Bunker Hill. If there is one thing more than another that is intractable and excruciating and makes a woman tired of life, it is this condition.

DR. H. P. COLE: I have had a little experience in treating rectal conditions with the high frequency current. I was called to see a gentleman who was suffering severely; the pains were such as we get from a deep seated inflammation, whether it be the result of fistula or not, affecting the deeper structures supplied directly by the nerves; the

kind of pains that follow defecation with the presence of fistula; or with an ulcer in the rectum. The patient reported that for a long time the movements were somewhat difficult and decidedly restricted. The stools were flattened, misshapen—flat on one side due to the decided swelling of the one side of the canal. This he noticed for a long time before the pain came on. After being relieved from the second attack of suffering he came to the office for treatment and I used the high frequency electrode—a glass electrode about three-fourths of an inch in diameter. I used it very carefully, of course, so as not to produce too much strain on the rectum, and gradually I relaxed my extreme caution because he suffered not at all from the treatment. I followed this up with about one dozen treatments; the condition had almost entirely disappeared; he had no pain on defecation and the stools had resumed the normal size and shape. I expected, in this case, to do a regular Pratt operation. There were some incipient hemorrhoids and it seemed as though I should have to do a complete dilation and opening up of these sinuses or points to relieve the deposits of blood clots. But after these treatments described the patient has had no trouble at all; the difficulty has disappeared; the rectum appears almost natural and the patient is in very good health indeed.

I have lately used the high frequency after the injection treatment. Of course injection treatment leaves in the beginning induration at the point of the hemorrhoids. This induration continues for some time. I have recently used a little massage in addition or following the injection treatment, to remove or rub out the deposits or little adhesions between the folds of the rectum, so that it was perfectly free.

And in addition to that recently I have used the same high frequency electrode, passing it four or five inches up the rectum and that accomplished, I get the benefit of the dilation of the electrode with the use of electricity, which I believe gives a much better dilation than we could obtain without the electric current, and with much less pain to the patient; and in addition to that we have the effect of the electric current. In several of those cases I have cleared up the induration and inflammatory deposit which results from the long-standing inflammation, much more quickly and much more satisfactorily than I have ever been able to do without it. I think it is going to be a means to an end which will be very satisfactory to all of us.

DR. ALFRED W. BAILY: Of course all of us have treated a good many cases of constipation with electricity in some form. I have never treated a case with the high frequency current as stated in the paper this afternoon, and therefore I am not in condition or position to discuss the paper. I thoroughly enjoyed it. I have two or three cases on hand now that I propose using it upon. I have used very frequently in the treatment of my cases of constipation an interrupted galvanic current. I have a little device that gives me a positive and a negative break on each side, which I use in treating cases of constipation, and I have had very good results from that.

DR. W. H. DIEFFENBACH: I will say that I feel highly gratified at the reception of this paper by the Society, and in closing would say

that I should like it very much indeed if the various members who have the high frequency current will try this method; and I am quite sure they will get good results.

As Dr. Hooker suggested, I should like to say a word of warning in using this treatment; in the cases of females you want to use a very mild application, because you are apt to produce an over-stimulation of the uterus and empty of it of its contents in some cases. I should say there is danger of too high current in such cases; and in constipation of females I should be very careful in using it where pregnancy is present.

I believe I have already mentioned that I have found that by the use of this treatment through the rectum, we can stimulate the prostate gland very much and help cases of chronic prostatitis; and I am using the vacuum tubes wherever I can in order to produce local stimulus, with gratifying results in some cases and negative results in others.

I have had an electrode constructed for use in the nose, in cases of hay fever. Ozone is set free from these glass tubes. It will destroy germs if the fever is due to germs; if due to specific irritation, I apply stimulation to the mucous membrane of the nose. We can, by sending these currents up the Schneiderian membrane, stimulate the membrane so that it is not quite so receptive to these irritants of hay fever. If, as some people believe, it is due to uric acid, of course that local treatment would be of no distinct value and it would be attended by negative results. So I propose using it this coming summer; I have used it in one case of so-called rose fever during the past month, relieving those membrance very markedly and I should like to suggest to members, if they have any cases of hay fever this summer, that they try some of these electrodes on the nasal mucous membrane; and possibly at the next annual meeting of this Society they will give their reports and we shall see if we have the same success in the treatment of that intractable affection.

REPORT OF TWO CASES PARAPLEGIA

M. BONNER FLINN, M. D.
WORCESTER, MASS.

CASE I. Mr. J. J. was born in Boston, Sept. 23, 1871. He was employed in a shoe factory. Sunday, Sept. 14, 1896, while riding his bicycle, he was caught in a thunder storm and made strenuous efforts to reach his home before the storm should break, becoming very much overheated. He was overtaken by the storm and made thoroughly wet and felt quite exhausted. He was, however, able to go to his work for two days, although suffering pain and general weakness.

At the close of the second day he started for home, but after walking a short distance, sank down helpless, his limbs having lost all power of the motor nerve. From that date he had no use of limbs. He suffered severe pain all over his body; a tumefaction with ecchymosis appeared on the fourth day at the right of the third lumbar vertebra.

He received ordinary medical treatment about three weeks, the physician calling his disease malaria and treating him for the same.

He then changed to electrical and massage treatments and continued with the same till July, 1897.

After this he received treatment at the Emergency Hospital of Boston for five weeks. There the case was diagnosed as hemorrhagic paraplegia. The physicians in attendance cauterized the spine at different dates; also used galvanic and electrical currents from time to time, but with no beneficial results.

On returning from the hospital he again took massage and electrical treatment, until August, 1898, having a great determination to get well.

From this time until April, 1899, he received no medical attention. Beginning again in April, 1899, to use the faradic battery, he received both medical and electrical treatment, both faradic and galvanic batteries. This was continued till May, 1900.

From that date till his entering the Odd Fellows' Home, in Worcester, in June, 1902, he was under no treatment of any kind. When he came here I found him suffering from paralysis of both legs, pain in both thighs and in the first three dorsal, and lumbar vertebrae.

He could partially support himself in a wheeled chair; was quite emaciated; had no control over the sphincter muscles of bladder and

rectum; his appetite was poor. I found he had full sensation over the entire surface of both legs. No response of muscles to any electrical test usually applied to cases of this kind. Arms were weak. He was placed under electrical treatment, once a week, using the mixed currents (primary and faradic) from twenty to thirty minutes. At the end of six weeks his appetite improved, so that he was gaining at the rate of two pounds each week; he had less pain, and, as expressed it, "was feeling more like a man."

From this time he received two treatments per week. Every week he has showed improvement, the muscles of his legs have increased, with slight motion and control of hip movements. At the end of six months, he could get in and out of his wheel-chair. He has regained full normal strength of arms and hands, and has commenced to use short crutches to balance on, in standing on his knees, and can now walk all around the building on his knees with the crutches. He also has regained the balancing power, so that he can ride around the city in the delivery team of the Home.

During the past two months he has been able to stand up, by holding on to a trapeze bar, and can swing his legs, one or both, back and forth.

Muscular action, quite plain to sight and feeling.

His weight has increased forty-five pounds; he has full control of bowels and bladder. Muscles of trunk and arms are normal and he is free of pain.

The treatments were as follows: First six weeks, cathode, foot electrode at feet, anode I applied with my hand to base of the brain eight minutes, then, through each hand, five minutes. At the end of this time I made a change in the treatment; still keeping cathode at both feet I applied anode, labile, to the entire spine for ten minutes, then anode in each hand for five minutes, continuing this mode of treatment twice a week for two months. I now placed one pole under each foot and reversed the current, in all ten minutes; then cathode to feet, anode five minutes to cervical region.

During the past month the muscles of the hips and calves of the legs have showed a slight response to the treatment. I am following up the treatments by applying the current to the different muscles of the legs, sometimes using the cathode and at others the anode. With a general treatment down the spine anode, cathode in foot bath, twenty to thirty minutes.

The point I wish to gain is, if possible, to restore the nerve growth by bringing a supply of blood and nerve food through mechanical con-

veyance of the current to the nerve centers, and so far the results seem to be encouraging.

CASE II. Mr. S. Van S., aged 67, was admitted to the Odd Fellows' Home, Worcester, May 1, 1899. He had been subject to epilepsy. May 3, 1899, he had an attack simulating epilepsy, followed by delirium. For several days he was in a dazed condition, very much like that ensuing from an epileptic fit.

From this date till the following April, there were no new developments in his case. On April 28, 1900, he complained of loss of appetite and much debility, and there was a tendency to impairment of the mental faculties.

July 16, 1900, he had a collapse, was cold, pale and perspiring, pulse very feeble, moaning.

June 17 he had an attack of hiccough.

On June 18 he first came under my care, still suffering from hiccough and very restless.

June 19, still very restless and delirious.

June 24, all symptoms improved, except that he continued paralyzed from the hips down.

July 3, 4, 5 and 6, convalescing, suffering from retention of urine; I ordered the nurse to use the catheter every six hours. By the end of two weeks the catheter was dispensed with. However, the remedies which had been employed failed to give permanent relief.

There was a lady inmate of the Home who had had some experience in the use of the magneto-electric machine and to her I gave directions for treating him three times a week. Anode, labile, to spine; cathode to feet, mild current, about twenty minutes, occasionally passing the current through both hands. After two weeks' treatment he had slight use of his legs lying in bed, complete control of the sphincter muscles, and his general strength was improved; he was sleeping well.

At the end of six months he was able to help himself in dressing. He could get in and out of bed alone, and was able to stand on his feet.

June, 1901. By this date he was able to go about on his crutches, for which he really had very little use.

June, 1903. During the past year he has gone all about the building, still using his crutches for fear he might fall. His mind is clear; he enjoys reading and the entertainments which are given at the Home.

I cite this case to call attention to the beneficial results from the use of the magneto-electric current in some cases.

DISCUSSION

DR. EDW. P. COLBY: I do not know that I have anything special to offer. We are using electricity in the hospital, mostly faradism, with beneficial effects. Nearly all of our cases are hemiplegia, and the different forms act differently in different cases. The very slightest form of electricity may in some instances mean a great deal more than a very large and apparent form does in another case, and for reasons that we cannot explain, either by the location or size of the lesion. It remains still the fact that you cannot by any means always tell by the appearance of your case how much benefit you can get; and for that very reason I should hope that our friend who has just spoken will try, even in his most apparently intractable cases, to get the most beneficial results; because in my experience, one month, two months, or three months, may count for nothing, and yet you get very tolerable results in the end. As I have said once before, before this Society, I believe in these intractable cases, there is nothing like keeping constantly at it, especially in an institution where you can do it. Keep at it as long as the rules of the institution will allow you to keep the patient, and you may get some unexpected benefit from it.

DR. ALFRED W. BAILY: About eighteen months ago I had a child come into my care who at that time was a little over two years old. The child was a large, healthy, well developed boy, who had absolutely no power over either hand or either foot. At the time of the birth of the child, so the mother told me, instrumental birth, the physician who attended her thought there had been a cerebral hemorrhage; and he treated the child and others treated the child, but without results; at the age of two there was no ability to move either hand or foot. The child was well developed, and the muscles seemed well developed. I treated that child for about four months, giving galvanism, the positive pole at the back of the neck and the negative over the arms and over the legs, giving a treatment once in three days. There seemed to be at that time very little progress toward a cure; there was some motion in the hands and some motion in the feet. The child lived at Atlantic City. The family removed to the western part of Pennsylvania; the child had no treatment at all but returned to Atlantic City about one month ago and I was surprised when called into the hotel to see the child running around in the room.

Now, whether the four months' treatment that child had received eighteen months ago started the improvement which gradually continued to a cure or not, is a question in my mind. I give it to you just as it came to me. After a few months there was very little improvement, only the beginning of motion in the hands and feet; and after over a year's absence, the child comes back to Atlantic City, walking, without having had further treatment.

DR. DIEFFENBACH: I should like to ask Dr. Baily whether he found any reaction of degeneration in that case when he tested it the first time?

DR. BAILY: There was a reaction, but it was a contraction of the muscles in response to the current. There was no voluntary contraction at all on the part of the child. Whether the child did not know how to walk and the electricity educated those muscles is a question.

DR. DIEFFENBACH: If there was no reaction of degeneration there was no paralysis. It must have been functional trouble of some sort.

I should like to put in one word more, and that is to caution against the use of faradism in paralysis. The current of selection is galvanism in almost every case; that is what Dr. Baily used. If you use faradism you are apt to stimulate the muscles, the effect extends to others and produces deformities. You do not get the general tonic effect that you would from galvanism. In all cases in which you find reaction of degeneration, galvanism is the current of choice; and sometimes we are surprised at the results in cases that seem to be incurable. As Dr. Colby so well says, it is a good thing to keep everlastingly at it and see if we cannot help some of these severer cases.

THE HYPERSTATIC TRANSFORMER

H. E. WAITE, M. D.
NEW YORK

H. E. WAITE, M. D., next showed several pieces of apparatus, including a Piffard hyperstatic coil, high frequency electrodes, and violet and blue ray lamps. In explaining the action of the high frequency coil he read the following communication from Dr. Piffard:

"As I am in a measure responsible for the introduction of the hyperstatic transformer (*Med. Record,* Oct. 20, 1900) and of the condenser-spark, or modified Goerl lamp for ultra-violet rays (*Med. Record,* Mar. 7, 1903) I believe that my personal experience in the technical management of these implements will prove of interest and of service to those who desire to use them.

"*The Hyperstatic Transformer.*—The instrument as supplied by the manufacturers is furnished with a glass muffler in order to obviate the unpleasant noise of the spark-gap. This at first seems to be a very attractive and desirable attachment, but it will be discovered that it not only muffles the sound but also impairs the efficiency of the instrument. Every spark that passes carries with it minute particles of metal which collect on the inside of the muffler, which in a short time form a coating that acts as a conductor and of course destroys or impairs the gap. If one desires to secure the utmost efficiency of the instrument, or, in other words, to 'work it for all it is worth,' my advice is to at once remove the muffler and the small sliding rod and to lose them where they will not again be found. The sole dependence should be on the gap between the sliding poles of the static machine. This gap need rarely exceed an inch; and in most instances half an inch will be found sufficient.

"Having connected the transformer to the static machine (with poles in contact) turn on the power and when the plates are revolving at about 300 or 350 times a minute separate the poles about an inch If the hand be brought near (two or three inches) one of the terminals of the transformers, it will be met by a diffusive electric spray (*effluve* of the French). The same will occur when the hand approaches the other terminal, but it will be noticed that the spray is more intense at one of the terminals than at the other; and it will be found that the stronger spray will be opposite the positive pole of the static machine. I usually connect the electrode with this terminal. If a very mild effect is desired the other terminal of the transformer is left free.

If a stronger effect is desired, the inactive terminal is grounded, and if still more action is required, this terminal is connected with some part of the patient's person. The strength of the current may be further modified by using a longer or shorter spark-gap. After studying the effect of the spray the electrode should be brought nearer the skin, and when sufficiently near, bright sparks will shoot forth to be replaced by a multitude of fine sparks when the electrode is brought in direct contact with the skin. The best spray effect and also the strongest sparks are obtained when using the electrode with metal point. The most generally useful electrodes, however, are glass vacuum tubes. I use a dozen or more of these of shapes adapted to the particular requirement of the case. Some are of low and others are of comparatively high vacuum.

"The transformer may be used with an X-ray coil by connecting it to the terminals of the secondary wire of the coil and adjusting the spark-gap of the coil so that the length of the spark shall be one inch or less. As the current delivered by the coil differs from that of the static machine (being of higher amperage or lower voltage) the current from the transformer will be somewhat modified. The spray will be shorter, more compact and finer; while from the vacuum tubes the sparks are much finer and more numerous. On the whole I find the current from the transformer connected with the static machine more effective than when connected with the coil. If the experiments are conducted in a darkened room the luminous effects are very striking.

"The *modified Goerl* lamp may be used either with the static machine or with a coil. If with a static machine the largest jars should be placed in position and the lamp cords connected with the outer coatings of the jars. The machine being set in motion the poles should be separated until there is free sparking between the balls of the lamp. The lamp may also be connected in another way. First connect the outer coats of the jars by a brass rod or chain, then attach the lamp cords to the sliding poles of the machine. The first method is the more effective, but at the same time more noisy.

"If the lamp is to be used with a coil, first connect the inner and outer coatings of a medium sized jar to the terminals of the secondary coil, and then the lamp cords in the same way. The current should then be turned on and the sliding poles of the coil separated until the lamp sparks between the balls. A current of six or seven amperes through the primary of the coil is usually sufficient to secure the full efficiency of the lamp. The ultra-violet rays will have but little effect unless the blood be removed from the part by pressure or better by the cataphoric introduction of adrenalin solution.

"The reaction following the exposure to the ultra-violet rays is quite marked, and the sensitiveness of the skin should be tested by a short first exposure, say five or six minutes, and to be increased as circumstances permit and to be repeated every second or third day. I have never found it desirable to prolong the exposure beyond twenty minutes when using the static machine, and fifteen minutes when using the coil. H. G. PIFFARD."

DISCUSSION

DR. ALFRED W. BAILY: Dr. Waite has spoken about the disadvantage of having that glass tube there to reduce the sound, as that sometimes becomes the carrier of the current. I am experimenting a little with mine. Not very long ago I had a patient who was very sensitive to the sound of the spark; and yet my last tube was in such condition that it would not allow of a spark more than one-sixth of an inch to pass. I put a little alcohol lamp under it and in about three minutes I had a spark one and one-half inches; simply by heating the tube. I kept the lamp there during the treatment of the case, far enough away not to heat the tube to redness, and have not had further trouble, and have used it that way since.

DR. THEO. C. WIGGINS: I believe the same thing could be accomplished by simply wiping out the tube. I believe it is simply decomposition of the air and you have a moist condition in the tube, and whether you dry it out with an alcohol lamp or dry it out some other way, you get the same results.

CONCERNING SOME OF THE MORE UNCOMMON PHASES OF ACUTE POLIOMYELITIS ANTERIOR

CLARENCE BARTLETT, M. D.
PHILADELPHIA

The ordinary clinical picture presented by cases of acute poliomyelitis anterior, including as it does the tendency of the disease to attack children, to occur during the hot months of the year, and to be attended by fever, paralysis or rapid onset without sensory disturbances of any kind, with reaction of degeneration and with absence of the superficial and deep reflexes, makes its recognition an easy matter. Indeed, I might say that a failure to diagnose all but exceptional cases is an expression of gross ignorance.

Occasionally, however, one meets with examples of the disease, in which diagnostic difficulties obtain. It is not the object of this paper to consider all of these in extenso, but only to refer to a few, which have been a matter of personal observation.

As stated above, the vast majority of cases are not attended by any disturbance of sensation, either in the form of anesthesia or peripheral pain. During the past winter, however, it was my fortune to have admitted to my service a colored woman, aged about thirty years, who presented fairly well-marked tubercular lesions in both lungs. Shortly before admission, she had been taken with paraplegia, and on her admission to the hospital, presented moderately severe peripheral pains. This led to the diagnosis of multiple neuritis. There was no disturbance of sensory perceptions, and aside from the tuberculosis, there was no assignable cause for the neuritis. Other than the peripheral pains, the case presented a perfect picture of acute poliomyelitis anterior. The mode of onset did not, however, correspond to that practically always attending multiple neuritis. Accordingly, my diagnosis differed with that of my predecessor. The characteristic regression so far as the paralysis was concerned of symptoms soon appeared; the tubercular lesions progressed.

The association of pain as one of the symptoms of acute poliomyelitis does not seem to have been impressed sufficiently upon the minds of practitioners. Gowers, probably more than any author has spoken positively concerning this symptom. He says: "In older children and adults, another common initial symptom is the pain already mentioned, sometimes referred to the muscles, sometimes to the limbs generally, occasionally to the course of the nerves. It is often absent, but may be very severe and accompanied by extreme tenderness of the

limbs. In such cases, the pain may be supposed to be in the joints, because it is produced by moving them, when it is really in the nerves, which are mechanically disturbed by the movement of the joints. In these cases there is neuritis, which may come on at the same time as the palsy, though independent of it. * * * Instead of being initial, pain in the limbs may succeed the onset of the paralysis, and it occasionally continues for several weeks, especially when seated in the nerve trunks. * * * Tingling or formication may be described by older patients, but sensation is seldom affected, even temporarily." My case happened to be one of those rare instances in which a neuritis was associated with the spinal affection; but the peripheral pains were short lived.

Interference with the functions of the bladder and rectum is not a common symptom of acute poliomyelitis anterior. Indeed, its absence is ordinarily regarded as one of the diagnostic data of the disease. Last winter, likewise, I met with a case which answered in every particular to the typical case of acute poliomyelitis with the exception of inability to empty the bladder. For days, the patient required the use of the catheter.

Respecting those rare cases in which the brunt of the disease is borne by one extremity, the diagnosis will always prove a matter of difficulty, unless one bears in mind that the motor phenomena are those of lesion of the lower motor neuron. Such being the case, the lesion must be in the anterior cornua or the peripheral nerves deriving therefrom. In other words, one is obliged to differentiate acute poliomyelitis and neuritis. A lesion of the peripheral nerves—providing, of course, it is a mixed nerve that is involved—sufficiently severe to produce complete loss of motor function, must necessarily disturb the sensory fibers as well. The differentiation of these cases then depends entirely upon observation as to the condition of the sensation in the affected parts. Anesthesia is present in neuritis; absent in acute poliomyelitis.

The possibility of traumatism producing acute poliomyelitis may be a matter of legal inquiry. In a case which threatened to result in a lawsuit for damages, I expressed my disbelief in the probability of the injury having given rise to the symptoms, and no suit was instituted. The patient was a girl of six years, who in playing about some iron railings left in the street, sustained a fall. No local injuries resulted, although she was somewhat shaken up. The matter was forgotten within a few days. But one week later, she was taken with fever, which in the course of twenty-four hours was succeeded by paralysis with absence of reflexes and preservation of sensation, and subsequent muscular atrophy. About the same time, another case, that of a

boy aged four years came under my care. In this instance, the child fell from a porch railing to the soft ground, but the fall was broken by bushes. Nothing was thought of the accident at the time. But two weeks later, he was taken with acute poliomyelitis anterior.

Although Gowers mentions as a fact that some cases occur in which the relation of the disease to traumatism cannot be doubted, to my mind, his illustrations do not prove his point. One must remember that post hoc is not a propter hoc. Children will fall. Indeed, such accidents seem to be a matter of almost weekly occurrence in the life of every lively youngster. Hence, if traumatism is sought as an etiological factor, it may be found. The clinical phenomena of acute poliomyelitis are not those of a traumatic affection. Traumatism is very rarely selective in the tissues which it involves. It is inconceivable that an injury sufficiently severe to damage intraspinal structures, should select cells limited to a portion of the spinal cord, and that, too, in a strictly symmetrical manner. Traumatism must be classed as a locally acting cause. Its symptoms must therefore be local. Bilateral symptoms must be the result of a centrally acting, or constitutionally acting, cause. The trend of medical opinion favors the infectious origin of actute poliomyelitis anterior. The factors upon which the new view is based include the manner of onset of the disease, which is that of aeute infectious diseases generally; first fever, followed by the peculiar local or general expression of the toxemia; the occasional occurrence of the disease in epidemic forms; the tendency of the disease to appear during the hot months of the year. Both of the cases mentioned above as alleged to be due to traumatism, occurred in July. We must admit, of course, that a severe traumatism may weaken a patient's receptivity, so that an infection, which would have been escaped otherwise, may take place. But such cases should present features which are not found in the typical disease as described in the textbooks.

DISCUSSION

DR. JOHN E. WILSON: The paper is one of much interest from the fact that very often we get these mixed lesions. The pure and typical cases do not apply for treatment and diagnosis early, but where they are mixed, then comes the question of the preponderance of the testimony as to the exciting and essential causes of the disease and into which category it shall be placed. Now, in the case of the negro woman, cited in the paper, I did not understand the doctor to say how much atrophy was present?

DR. BARTLETT: Very slight; you understand that I saw the case early.

DR. WILSON: It is noticeable that in these cases where tuberculosis precedes the appearance of the spinal symptoms, it will give rise to

neuritic symptoms, more or less transitory, and more or less permanent, but the case lacks the atrophy which is considered diagnostic of this disease, in the absence of waste of muscular tissues, and emaciation it would give rise to a good deal of doubt. The concomitant of pain occurring along the nerves in some cases is explained, I believe, by the statement of Gowers, that in those cases where we find toxic conditions of any kind the nervous system is selectively attacked in a good many different ways. So long as we have the nervi nervorum affected you will get pain, and you will get that pain along the anatomical line, although it is not along the line of causation of the disease.

The point of traumatism, brought out in the paper, is really the particular point of the whole paper. Traumatism acts in this way, we frequently find, and it has been noted, and the statement has become a classical one, that nerve shock, and even psychical shock, will produce very minute hemorrhages in the cord. Overexertion and fright will do the same thing, so traumatism comes in for full credit as an etiological factor; and it seems to me the reason why we are apt to get the wasting which at times follows the anterior poliomyelitis and atrophy can be attributed to traumatism even when external evidences are wanting. The anatomical reason for this lies in the fact that the anterior horns have an immense arterial supply and a poor venous drainage, whereas the posterior horns have a small arterial supply but a large venous drainage. It seems to me then, that anything that would increase an injury by pressure, or suddenly exerting pressure would act unfavorably on the functions of the cord and thus give rise to these symptoms which indicate the growth or life of the cells in that locality is interfered with, and the anterior horns are exceedingly susceptible to such injury.

DR. T. E. LANE: In reference to one point made in the paper I would say that in our place, a city of 25,000 inhabitants, about five years ago, I think, we had something over thirty cases at one time. It was epidemic at that time. Most of the cases occurred in the poorer families, or in the middle class, and personally I did not know of one among the better class of children. Some of these cases commenced slowly and would act almost like they had rheumatism. There would be more or less stiffness for a few days in moving around, then in a short time would come fever, followed by the attack of paralysis in one side, or one limb—mostly in one arm—sometimes one leg only would be affected. So far as I know every case recovered, but the victim was left with more or less atrophy of the part affected. I simply give this bit of history to supplement the statement made by Dr. Bartlett that poliomyelitis does occur in epidemics. This is the only time I have ever known of its occurrence in our place.

DR. EDWARD P. COLBY: I have been very much interested in this paper by Dr. Bartlett and I am exceedingly gratified to find that someone else besides myself has found cases of poliomyelitis in which there was pain, perhaps extending over a longer period of time than the initial symptoms would warrant. It has been my good fortune, or bad fortune, to have had quite a number of cases of poliomyelitis under my care and quite a number of them have manifested

as an initial symptom, lasting a longer or shorter period, pain, this pain extending beyond the strict region where the paralysis manifested itself at the time. We know the paralysis is greater the first few days than at a later period of attack. My interpretation of this phenomenon, if we may so call it, is that anterior poliomyelitis is an inflammatory infection depending upon some germ. This is a point I hope to bring out later when Dr. Richardson will let me. This inflammation attacks the cord and in the beginning, as you will find, in cases where the nerves are affected by inflammatory processes, the apparent involvement is far beyond the ultimate lesion, and where you have the posterior horn involved, in the incipient inflammation the apparent lesion is still much more serious. Where the inflammatory lesions, from one reason or another, as mentioned by the gentleman who has spoken, as well as the one who preceded him, does not go on we have a condition where the blood supply is entirely different, we have what is termed acute congestion; that is to say, we have hyperemia with dilatation of the blood vessels, but lacking sufficient exudation of leucocytes to produce true inflammatory processes. Absorption then takes place before we have the beginning of a true lesion. If this does not explain the course of the affection I do not know what does. In those cases which have promptly recovered—and these are the cases I have referred to in my discussion—there has been in my opinion no neuritis whatever, there was irritation. Whether there is loss of sensation, or paralysis in these cases I am unable to say, because we all know how difficult, extremely so, it is to decide this question in this class of cases that we have to deal with most frequently in poliomyelitis. They are irresponsive as regards the question of sensation and there might have been a dimunition of that, and I not discover it.

I have a case under my care now of a different nature in which I am somewhat in doubt in my diagnosis of the case because the amount of pain has not only been great, but it has been continuous, and there has presented no characteristic indication from which I could positively declare that neuritis was present. The joint pains, more particularly, were present, and were considered rheumatic for quite a while. It is extremely rare to meet these cases of acute poliomyelitis anterior in adults. In this case pain was very marked and quite long contiued; but it has entirely disappeared and without any of the sequelae or usual symptoms of neuritis being left.

Dr. Clarence Bartlett: In the case of the colored woman I would say that the pain began at the time of the incident and the paralysis continued for about a week. The function of sensation was very accurately tested, not only once, but daily, during her first two weeks in the hospital, and there was no question whatever about the integrity of the sensation in this particular case. My own views as to the pathology which gave rise to the pain was suggested by the remarks of Dr. Wilson that the nervi nervorum were at the bottom of the pain. I hardly feel that in this case the pains were such as we find in tubercular conditions, although we do know that there are frequent periods in the course of nearly all phthisical cases in which the patient suffers more or less with severe peripheral pains.

GALVANISM IN TABES—ITS INDICATION, MODE OF ACTION AND METHOD OF APPLICATION

FRANK C. RICHARDSON, M. D.

BOSTON

In a paper read before the National Society of Electro-Therapeutists at its meeting held in Boston in 1896, I presented some views concerning the palliative effect of strong galvanic currents upon tabes dorsalis and cited cases corroborative thereof. In a supplementary report made to the Boston Homœopathic Medical Society, additional evidence was offered in favor of the value of this therapeutic agent in the treatment of affections of the posterior neurons. In both papers I stated that in some cases electricity had failed to produce any effect, and I was unable to offer any explanation of either success or failure.

In the discussion provoked by these papers there was much speculation as to the mode of action of electricity in such cases; doubt was expressed as to whether the current even reached the well insulated cord, and the whole matter left in the obscurity which so generally surrounds this subject wherever referred to. Indeed, a review of the literature bearing upon electro-therapy in the treatment of tabes reveals the vague character of existing information concerning it, as witness the following notable examples.

Gowers states that electricity has but little influence on the chief symptoms of tabes and adds that the voltaic current is powerless over either the pains or the ataxy, whether it is applied to the spine or the limbs.

Dana affirms that electricity is of use from its general tonic and reflex effects and perhaps exercises some direct influence on the disease process. He recommends strong galvanic currents (15 to 30 ma.) applied along the spine, through the trunk and down the legs and arms.

Surely no part is slighted in this advice, and as to polarity no partiality is indicated.

Hamilton mentions the fact that Meyer has reported several cures by the galvanic current, but hastens to add that these cases in which cures have been wrought were probably ataxic conditions of a functional character.

Starr's only reference to the use of electricity in tabes is that "occasionally the faradic brush relieves an attack of pain."

Hammond says that the primary galvanic current applied to the spine on each side of the spinous processes is an agent which ought

to be used, and that he has used it with success in several cases in conjunction with other means. He adds, however, that ordinarily it has not appeared to him to be of any material service.

Rosenthal speaks highly of its beneficial influence.

H. C. Wood says he has never seen electricity do the slightest good in tabes.

Benedict reports cases in which it alone has apparently effected cures, or arrest of the morbid process.

Peterson states that it is difficult to determine whether any actual benefit is to be derived from electricity.

Bramwell states that if active anti-syphilitic treatment fails the galvanic treatment should be commenced and describes at some length the method of application which has proved successful in his hands.

Möbius of Leipsig says: "Electro-therapy in tabes in my opinion is suggestive treatment," and scathingly adds, "That this 'mighty physical remedy' is of influence upon the tabetic process is so difficult to believe that a 'sacrificium intellectus' is really necessary for faith."

Erb, on the other hand, thinks that evidence abounds to establish beyond all question, the value of the galvanic current in tabes.

And so throughout this field of literature, from the pioneer writings of Remak down to the present time, is to be found the greatest diversity of opinion, not only as to the efficacy of this therapeutic agent in tabes, but as to its method of application and mode of action, concerning which last few writers venture to advance a theory.

This existing chaos is most confusing and discouraging to the inquiring mind, eager for aid in the treatment of a disease the prognosis of which is usually regarded as unfavorable, and is justification of any attempt to place the electro-therapy of tabes, even theoretically, upon a definite basis.

From experience derived from a considerable number of cases extending over a period of twelve or more years, I am led to conclude that the value of strong galvanic currents in certain cases of tabes, where there could be no reasonable doubt as to the exactness of the diagnosis, is established beyond question.

Nevertheless, in the present age of investigation we are not satisfied with mere clinical results, but seek for a definite, or at least plausible explanation of such result.

In the present instance two questions inevitably arise; namely, how does galvanism act favorably upon tabes, and why does it influence some cases and not others?

For a definite answer to these questions two factors are essential. First, an intelligent understanding of the nature and pathology of the

tabetic process, and second, a comprehension of certain facts of electro-physiology.

The older and hitherto accepted teachings as to the pathology and morbid anatomy were to the effect that the tabetic process was primarily of an inflammatory origin, an exudation of lymph leading to a proliferation of neuroglia or connective tissue, with consequent compression and ultimately structural disintegration of the nerve fibers in the posterior columns. Extensive degenerative disease of the peripheral nerve fibers has from time to time been noted, but such peripheral changes have been considered until recently as of secondary rather than primary importance.

With a pathology confining the tabetic process to the cord itself and the improbability that any portion of the electric current penetrated the thick bony envelope surrounding it, it must indeed have required a "sacrificium intellectus" to have had faith in the efficacy of galvanism in this affection.

Recent methods of pathological research have, however, brought to light facts which demand radical modification of former views, and to my mind, afford adequate explanation not only of the success of electro-therapy in some cases of tabes, but of its failure in others.

While the pathogenesy of tabes is not yet perfectly understood, enough has been proved to demonstrate that it is *not* a primary sclerosis of the posterior columns. According to the newer teaching tabes is being regarded less and less as a disease limited to the cord, and the tendency of accumulating facts is to lead us to consider it in many cases a peripheral disease of the sensory and motor nerves and the nerves of special sensation, due to nutritional disturbances. In these cases the ganglia on the posterior roots are usually affected. These ganglia, it will be remembered, are the trophic centers, not only for the sensory nerves, but for the neuraxons, or axis-cylinder processes of the dorsal columns of the cord. This fact has led Marie to attribute the peripheral nerve lesions to primary disease of these trophic centers.

Mottler, on the other hand, holds that the neurons first to exhibit signs of malnutrition are in parts farthest removed from their nutritive center, namely the cutaneous and muscle sensory arborizations. The studies of Dejerine, Wallenberg, Obersteiner, Sherrington and others as to the relations in health and disease of the distal-nerve arborization in muscle plates and muscle spindles to the muscular sense and its perversions, are all distinctly corroborative of this theory, and demonstrate conclusively that these changes in the distal arborizations of the sensory neurons, even though slight, are sufficient to cause

the lightning pains, the diminished knee-jerks, pupillary changes, the vesical and sexual symptoms and other sensory and trophic disturbances characteristic of this disease.

Marie admits, however, that in many cases autopsy reveals no demonstrable lesion in the posterior ganglia, and such cases may be said to represent a type in which the disease process begins, and expends itself upon the dorsal columns.

Philippe (Arch. de Neurol., Sept., '97) states that the evolution of tabes follows two types: the benign and the grave. In the latter the lesion is in the cord, resulting in very rapid destruction of the posterior columns. In the former, on the other hand, the lesion is in the posterior roots outside the cord, and has little tendency to spread.

It would, therefore, seem legitimate to recognize a peripheral and a central form of tabes. To the latter class belong those cases which are not influenced by galvanism, because the current cannot penetrate to the morbid process. The peripheral lesions, however, by reason of their accessibility, are susceptible to the influence of galvanism, and it is this class which furnishes us our successful cases.

My own clinical experience conforms entirely with the above theory, which, I believe, is the key to the intelligent use of electricity in tabes.

In regard to the etiology of tabes, Watson (Brit. Med. Jour., June 1, 1901) holds that the lesions of the neurons are determined by local interference with the blood supply. This does not exclude the consideration of a varying vitality of the neurons as an important factor. Further, he states that there is good ground for the belief that the condition is dependent upon a chronic auto-intoxication, the vascular lesions being to some extent general, but tending to be more advanced locally, and that the more advanced local changes determine a failure of nutrition in the dependent nerve tissue.

While we are not yet possessed of sufficient data to clinically differentiate the two types of tabes with accuracy, my observation leads me to subscribe to the truth of Philippe's statement that the peripheral type especially exhibits pains while numbness and tingling indicate rather an affection of the cord.

Although tabes is generally regarded as a para-syphilitic disease, I am emboldened by clinical observation to advance the theory that many of these peripheral cases may be the result of syphilitic vascular lesion, and the early manifestation of tabetic symptoms has been to me a further diagnostic indication of the so-called benign type.

With these facts and theories in mind let us inquire into the probable mode of action of galvanism in the peripheral type of tabes.

So far as the posterior ganglia are concerned they are nearly if not quite as much insulated as the cord itself, and while the nutrition of these ganglia can undoubtedly be influenced by action upon the vaso-motor center of the spinal vessels, I feel that our best results are to be obtained by influence upon the peripheral sensory neurons in the spinal nerves themselves.

We know that upon galvanic stimulation a contraction of the blood-vessels is first obtained, and that this is followed by a dilation; also that the constant current is a direct stimulant of the vaso-dilators. This induces a determination of blood to the part acted upon and so promotes nutritive changes. Such action is best brought about by the stimulating effect of the negative pole. Add to this the kathodal catalytic effect of softening and liquefying tissue and it should not be difficult to understand the favorable influence produced directly upon vascular lesions dependent, perhaps, upon thickening of the intima and infiltration of the media and adventitia, and indirectly upon the adjacent nerve elements.

It seems to me equally clear that these results can best be obtained by applying the kathode as the active pole to all parts of the spine successively, as this will include the largest number of neurons at the location of their poorest blood supply. Sufficient current strength should be employed to produce the greatest amount of diffusion.

Experience with this method of application has proved it to be efficacious and I may be pardoned if I mention more in detail the modus operandi.

With the patient clothed in a robe or frock open at the back, the whole length of the spine is exposed while the rest of the body is protected. The anodal, or indifferent pole, is made a flat electrode having a surface of at least three by five inches, and placed upon the sacral region. For the kathode I would recommend an electrode so constructed as to conform to either side of the spinal column with a surface about an inch and a half wide by five inches long bridging the spinous processes but not in contact with them. This is to be the active pole and is placed over the cervical spine.

With the electrode so placed a current of from 15 to 30 ma. is passed for three minutes; the current is then turned off and the active pole moved down its length and the same current passed for the same length of time. This process is repeated until every part of the spine has been covered at least once and in severe cases twice.

The current should be the strongest which can be comfortably borne by the patient. With sufficiently large and well protected electrodes I find that the average bearable strength is 30 ma.

All sudden variations in the strength of the current, especially interruptions and reversals, are to be avoided. The current should be gradually increased from a feeble one till the required strength is reached, and as gradually reduced. Of course the skin should be thoroughly moist.

In closing I would summarize the conclusions arrived at in this paper as follows:

Modern pathology, by revealing the pathogenesy and morbid anatomy of tabes, affords a scientific basis for its electro-therapy, concerning which subject the greatest confusion has prevailed.

In the grave type of tabes the morbid process is in the cord itself and is uninfluenced by electricity because of its inaccessibility.

The observations of reliable investigators make it legitimate to recognize a form of tabes in which the lesions are largely confined to the peripheral sensory neurons and therefore accessible to the galvanic current.

These cases may be differentiated from those of central origin by the predominance of pain and their early appearance after primary syphilitic lesion.

They may be differentiated from multiple neuritis by the absence of electrical changes, motor palsies, and local tenderness, and by the presence only of those symptoms which can be referred to sensory neuron disturbance.

Their lesions are primarily due to vascular changes which may be arrested and greatly modified by galvanism through vaso-motór stimulation and satalysis.

To obtain the best results strong kathodal currents should be applied through a specially constructed electrode.

Finally I would suggest that for the term peripheral or benign tabes, usually applied to the condition herein described, there be substituted the name "Pseudo-tabes."

DISCUSSION

DR. EDWARD P. COLBY: Dr. Richardson and myself are commonly interested in this subject, and we try to defend each other whenever it is necessary. But I regard this subject as of very great interest, and I agree with him in extenso and detail in his deductions, only I want to go a little further backwards in the matter. Gowers, in his little work published since his classical textbook, speaks of the peripheral type of tabes, although he speaks of it in a way in which he leads us to think it is quite rare. Still he certainly has recognized such a condition. But in all of these conditions of tabes, including not only tabes but some various other lesions of the nervous system, I think we have forgotten, until recently at any rate, to go quite deep into the

subject and consider the various varieties, the confusion, in other words, that all of our nervous diseases of organic nature are multiple; that they do not move in accordance with our preformed ideas or with the plans of campaign laid down by any author. In tabes we have the peripheral symptoms, manifested early or later, we have loss of reflexes and the various symptoms that I need not go on to mention, but how many of us have seen symptoms which were entirely disconnected from the spinal cord; symptoms which could only be referred to the cranial nerves or to the central nervous matter back of it? We have the ocular symptoms, the oculo-motor symptoms, sometimes preceding the symptoms of the lower extremities. We have the transitory or permanent, as the case may be, paralysis of the eighth pair, giving us some form of deafness, such as in many cases only appears later as a late symptom of tabes. Now, this all presents itself to my mind as a condition of things which could only be brought about by certain poisonous influences existing in the body, which, for want of a better term, we have called toxines, the result of some weakness, some mal-physiological action, some previous disease, perhaps acute or chronic in its type, so altering the metabolism of the system that there are produced poisonous influences producing these marked effects upon the central nervous system; not always upon the central—I do not wish to limit myself to that—but upon the nervous system, both central and peripheral. Now, the multiplicity of the affections that occur following certain diseases which are alike in the different steps, would seem to imply that it is not always the same toxine or the same toxic influence which is reproduced. Therefore we might judge that the nervous system is subject to toxic influences from various of these poisonous principles. Of these we are informed on good authority that some of them produce paralysis, that others are retained and produce over-stimulation or irritation with the consequent results. Now, I submit that looking at it from that light, I am not only accepting Dr. Richardson's postulate, but I am endeavoring to go a little farther back and get at the foundation of the thing if it is possible. Now, what does that lead us to? That leads us to a careful analysis of the early symptoms, and at a time when we may hope it may do some good; to a careful exhibition of the appropriate homœopathic remedies. I am, I know, forcing the issue a little in bringing this question before an electro-therapeutic society, but when a man is riding a hobby, he does not care if he rides it over the fence or into the ditch. Now, this is a hobby of mine, I am free to confess. I have seen some things since I have been studying particularly upon this subject that rather are tending to confirm this hypothesis; that there is a large percentage of nervous diseases, serious but not always organic in their nature, that are certainly dependent upon toxines. For over a year I have been examining as many as possible of my cases of epilepsy, and have examined them as often as I could in one way. Suspecting that an auto-infection was going on, I have taken the only means in my power to examine the urine, and it is at least a coincidence, if not more, that in of my epileptic cases I find we have an increase of indican in the urine which seems to correspond with the epileptic explosions.

I have not worked out the analysis for sulphates and the ethereal sulphates, although I hope to accomplish that yet. I grant you that my premises are small, but I bring this forward at this time because it is a matter of so much interest and seems to me so plausible that I would like to have others make similar investigations in these conditions and have the ethereal sulphates examined for in various nervous affections and decide if there is not some evidence of auto-intoxication going on from some intestinal absorption.

Now, in regard to the effect of electricity on these cases—this is coming back to business—is there any other explanation than that of Dr. Richardson's in regard to this matter, why electricity can and should relieve them? In nearly all organic nervous diseases it is my belief that there are certain neurons involved and sick which are not destroyed, that do not functionate normally; they are either over-active as are the peripheral and central neurons when we have periods of pain in gastric crises in tabes, or they are paralyzed, or they are non-active, as in some other cases where you have paralysis and numbness. I do believe that the use of electricity properly applied in these cases is capable of reviving some of the neurons not destroyed but lying idle, and thus improvement take place. Again, provided my original hypothesis is at all correct as to the auto-toxin theory, we cannot for a long period administer so powerful an agent as galvanic electricity without at the same time electrifying the whole patient, and in doing that, using the means of invigorating the whole system and assisting the metabolism, that is to say, assisting in overcoming the toxins, which I think we should not by any means forget; and on either of these grounds, as well as those mentioned by Dr. Richardson in the pseudo-tabes or peripheral tabes of Gowers, I believe that electricity is beneficial, but in order to be beneficial it must be persisted in for a long time.

Dr. John E. Wilson: I would like to say that the paper was of inestimable value when it pointed out the diverse lesions which are present in tabes dorsalis. I think there are a lot of theories being elaborated of the posterior ganglia being the site of the disease, and because of these different theories we cannot argue as to whether the treatment would help; whereas the modern conception as to its being an infection has clarified many of the experiments which clinically seemed to prove that tabes cannot be helped. I think, however, it is a valuable thing to keep in mind that it can be cured occasionally. There is a little comfort, in reading authorities, to know something about these men who write. One whom he quoted I have personally such knowledge of that I can confidently say that his views on electricity do not carry any weight. I think he would not know which pole to use in a given case, or whether to use the X-ray or the faradic current. I think he is largely in doubt on this subject himself. These things run in fashions; the head man in some clinic condemns a certain line of treatment, and that ends it, and he sends out a lot of men who think exactly as he does; so, unless you have reason, without prejudice, do not condemn any measure without a fair trial. I would like to add, from my personal experience, that I have found, in treating tabetic

patients with strong galvanic current, to do this successfully, you must put on your most saccharine manner in handling them. You must also be careful not to hurt your patient, because he will consider it an injury, and you must keep this treatment up for a long time in order to effect a cure. In regard to another point, I was very glad to hear Dr. Colby speak on the presence of indican in the urine, and also in some other nervous conditions. Through the courtesy of one of the internes of the Homœopathic Hospital, about the middle of June I had an opportunity to try these examinations in a few cases, both epileptic and insane, and found that prior to the explosion the indican was pretty fairly pronounced. I had a case a while ago of acute melancholia lasting for nearly a year, which attracted considerable attention. Following her first attack she had an eight-or-nine-year interval of perfect health. Then the indican began to display itself in the urine and the melancholia reappeared and deepened, but by proper diet this was corrected and the patient recovered. I think this matter of examining the urine ought to be followed out very carefully in all cases. I think the doctor has struck something that will prove of great advantage to a lot of people and enable us to get ahead of many of these cases. My treatment is diet very largely, and strong elimination in all cases.

Dr. N. B. Delamater: May I be excused for a moment for alluding to the element of the urine in conjunction with not only tabes and epilepsy, but in all nervous conditions? It has been my habit for a great many years to have in every case a full, complete and qualitative analysis made of the twenty-four hour urine, and having this done at frequent intervals. That there is a very decided relationship existing between the condition of the urine before an explosion of epilepsy, or other nervous phenomenon there can be no doubt. After years of experimenting and observing along this line I know there is a peculiar relationship existing; and in a large number of cases of melancholia, as well as acute mania, we find a very decided wrong in the elimination of the urine; and in some of the cases it is only the question of bringing about a normal standard by proper elimination to effect a cure. For instance, I remember one case of some long standing in which I made the experiment as to the effect of establishing proper elimination, using no medicine, save one of the lithia waters. Examinations were made every day of the urine and its condition was a perfect barometer of the patient. The patient recovered. I consider an examination of the urine in these cases as essential to the successful treatment as the use of anything, or the need of an office.

Dr. E. C. Richardson: I have been very much interested in this question of toxines and as to the method of keeping track of them by frequent analysis of the urine, and it is something I most heartily endorse. In regard to the discussion of my paper, I would like to say that my belief is that this form of disease, or tabes, as I call it, should not be classed as an irregular type of affection; that it should not come in as an affection with concomitant lesion of other tissues, but that it is a regular type and should be recognized as such; that

it has a regular and characteristic feature; that it is entitled to a definite classification and to a name. That is why I suggest the name of pseudo-tabes. I should not admit that it is proper to class it or to explain it as being connected with other irregular symptoms. I would not dispute for a moment the beneficial effect of drug therapeusis in the early symptoms, that is, symptoms preceding the onset of tabes, and I did not touch upon that subject at all in my paper. As to Dr. Wilson's comments and theory in regard to the application and the result upon the good feeling of the patient, physical and mental, I have found that by using a large electrode well protected, as stated in the paper, the average current strength which can be borne with comfort, 30 milli-amperes, is best. I think that statement perhaps covers the whole ground. I think the trouble with many operators comes from using too small electrodes or insufficient protection of those electrodes.

THE EFFECT UPON THE SPINAL CORD OF INJURIES TO THE SPINAL COLUMN

A. P. WILLIAMSON, M. D.
MINNEAPOLIS

The spinal cord is composed of an aggregation of delicate white thread-like processes of nervous tissue inclosing a series of H shaped corda equina, and is eighteen inches long. It is suspended from the gray masses. It starts from the medulla oblongata and ends in the foramen magnum of the occipital bone to the second lumbar vertebra in a tunnel formed by the bodies and processes of the vertebrae. It has more than a half-inch of space around it and it is connected to its bony surrounding by extensions from the pia mater, called the ligamentum denticulatum. Passing off from it and into it there are thirty-one pairs of nerves, *i. e.*, eight cervical, twelve dorsal; five lumbar, three sacral and three coccygeal. These nerves pass respectively out and in through foramina in the vertebral column at varying distances from their places of exit from the cord.

The cord has a play of an inch and a half to accommodate itself to changes in the posture of the body.

These are elementary facts which must be kept in mind in all traumatic conditions involving these structures.

The localization of spinal cord injuries is a very easy matter, that is the diagnosis; but the cause of the disturbance in function is not readily determined, this is the pathological diagnosis.

A careful study of the areas of anesthesia, and hyperesthesia, together with observation of the motor changes, will quickly discover the spinal segment at fault; but whether there is hemorrhage, without or within the membranes, or compression or laceration of the cord itself is a question which offers great difficulties in solution.

We will try to illustrate these facts with five cases from our experience.

CASE I. A man 27 years old was struck by a heavy piece of timber across the dorsal region, fracturing the laminae of the seventh, eighth and ninth vertebrae. There occurred at once a motor paralysis from the edge of the ribs downward. The legs were flaccid and powerless—sensation was also lacking from a line corresponding with the seventh vertebra. The urine trickled away involuntarily, and the bowels moved only when a large enema had been given. We saw him about two weeks after the accident and no improvement had

taken place. Laminectomy was performed, all the fractured bone was removed and pressure was relieved. On opening the spinal column the membranes appeared intact, and there was no evidence of hemorrhage in the membranes or of compression.

No relief followed the operation and the patient died a few weeks later.

An autopsy was refused.

In this case doubtless there was a laceration of the cord itself.

CASE II. A man aged 32 years was thrown from a height by the sudden giving way of a scaffold. He struck on his back across a railway track. When picked up he was found to have lost the use of both legs. No fracture or dislocation of the vertebrae seemed present. The bladder and bowels were paralyzed. One leg was totally useless, but the other had some power in the thigh muscles; but the leg and foot were incapable of motion. Sensation was destroyed on the outer aspect of both thighs; but there was feeling in the inner side and also of the dorsal part of both feet.

When we saw him seven months after the accident, some slight improvement in motion in the legs had taken place and when the bladder was full he could expel a part of its contents. Bed-sores over the coccyx had appeared, but were healed. His general health was excellent and he had gained in weight during his confinement in bed.

According to our diagnosis there had been a hemorrhage, probably on the cord, producing pressure and thus interfering with the conductivity of the afferent and efferent impulses, as this clot contracted the spinal function was gradually being restored.

CASE III. A man 62 years of age fell from a load of hay, striking the top of his head on the ground. No external injury was visible.

When we examined him, a week after the accident, he was totally paralyzed from his neck downward. His breathing was irregular, and at times he had severe attacks of hiccough. As transverse myelitis evidently existed at the time of the examination an operation was not advised. He gradually grew weaker and died three weeks from the day of his fall.

A post mortem examination was refused. From the severity of the symptoms a large hemorrhage, or extensive destruction of the cord, was diagnosed.

CASE IV. A man 48 years of age fell from the roof of a building, sixty-eight feet from the ground, landing on both feet. He was said to have been paralyzed in both legs when picked up. We saw him five hours after the accident and then he had fully regained the

use of his legs and there was no evidence of sensory disturbance. He suffered severely with pain over the eighth and ninth dorsal vertebrae and there was a marked prominence of the spine of the ninth, but as this was immovable and pressure on it did not produce pain we concluded this was an occupation deformity of unknown age.

In ten days the patient entirely recovered. The diagnosis was that the man sustained no organic lesion and that the temporary disturbance of function, if one existed, was the result of a possible contusion, when the position of the cord was violently changed by being thrown violently upward and immediately downward.

CASE V. A stout woman 38 years of age was entering a street car and was suddenly thrown forward on her knees by the unexpected starting of the car.

An examination a week after the accident showed no objective signs whatever. She was able to perform her household duties as usual, and there was neither motor or sensory disturbance discoverable. She complained of severe pain over the lumbar spine, but was unable to localize it, with occasional shooting pains down the front and back of the thighs. About six weeks later some paralysis of motion appeared which gradually extended upward and downward, accompanied by anesthesia in the same parts; finally other symptoms of transverse myelitis appeared and death occurred six months after the accident.

No autopsy was held.

This case was probably one of small hemorrhage in the cord which was followed by softening and transverse destruction of the cord.

From these cases it will be observed that traumatic diseases of the cord offer great difficulties, both in diagnosis and prognosis. Severe trauma may occur without serious cord symptoms, and very slight injuries may be followed by the most untoward indications of cord involvement.

Experience seems to teach, however, that when there are organic changes in the cord, or of its membranes due to injury, there is danger of rapid extension of the resulting morbid processes with a strong probability of a fatal termination. Even when a fracture of a vertebra is discovered and laminectomy is promptly performed and the pressure relieved there is not always a cessation of the progress of the mischief. It is difficult to account for this condition except that the multiplicity of the functions of the cord and the innumerable thread-like filaments which compose it are so complicated that any disarrangement of them leads not only to an interference with their

work, but also lowers the vitality of organs far removed, and induces a general asthenia which it is impossible to overcome.

On the other hand, severe falls or blows directly upon the spine are sometimes followed by only temporary loss of function or by gradual restoration to health when the immediate symptoms seem grave.

There are few conditions which render prognosis more difficult and the greater our experience the more difficult becomes the question of the future of such cases. Apparently those of the most mournful outlook will surprise one by recovering, and some with slight symptoms will end with those most dreaded. After myelitis sets in all doubt is removed, the functions which are destroyed by this process are never renewed and while such symptoms are absent hope should always be entertained of a more or less complete restoration.

DISCUSSION

DR. O. O. BISHOP: The injuries to the spinal column, which have come under my observation, have been of the most severe type, such as gunshot wounds and fractures. I am not, therefore, in a position to discuss cases like those described in the latter part of the writer's paper.

In regard to the operation, laminectomy, I will say that it has been of immense value to me even in the very serious cases. Although many of these cases died, the benefit from operation has in some cases been marked. Again, we must admit that many times we fail to reach that part of the cord or spinal column most damaged, and unless an autopsy is made on those cases which prove fatal, we are inclined to doubt the value of laminectomy. When I fail to help these cases by operation I am inclined to blame myself and not the operation, and the findings at the post mortems usually prove that the operator has not entirely relieved the pressure or evacuated the blood-clot.

DR. FRANK RICHARDSON: In regard to the matter of laminectomy, in regard to the operation on these cord injuries, or rather these bony injuries resulting in injury to the cord, I wish there could be some means of arriving at a definite opinion in regard to the advisability of operation. At the present time there seems to be great diversity of opinion. In Boston we have neurologists who discourage operation, and those who are very much in favor of immediate operation. I think all will agree that unless the operation can be immediately performed it is useless. I have been very much impressed with the fact that the cords of patients who have died from trauma show such widespread hemorrhage, and this result demonstrates the impossibility of arriving at a definite conclusion as to the exact location of the hemorrhage. I am not speaking now of cord crush, which is beyond us absolutely, but am speaking of cases of hemorrhage,

the destruction of tissue. The absolute degeneration is so extensive as a result of even slight hemorrhage that operation seems to be useless. At our own hospital we have not had good results in those cases, and it leaves us very much in doubt as to the benefit arising therefrom. Nevertheless I think we should all operate if we could get the case immediately, that is, within a few hours after the injury. These cases are occurring much more frequently because of the advanced methods of construction of building and because of risks that are run because of the heights to which men go in building, etc. Injuries are more frequent and we are getting an increased number of those cases, and the matter seems of the greatest importance, and I hope the matter will be discussed very freely.

DR. JOHN E. WILSON: It is wrong to vilify the absent, but I do not agree with the statement that it is perfectly easy to localize these damages by the peripheral symptoms, or at least I am not up to it, and I have seen a good many other men make mistakes. There are a good many elements come in which lead us to believe that the damage is sustained at a certain point, but I do not think, taking the cases as they run, a man would care to stake his everlasting salvation on being able to put his finger on the point where the extravasation exists. The looping of neurons up and down confuses things; it is bound to. The fact that they loop in every direction and in different positions makes the trouble. I fully agree with what Dr. Richardson said about the immediate operation. The sooner you can get at it the sooner you get some show. The case to which Dr. Bishop referred was one for which I was partially responsible. We took out a clot and could not find any reason for the existence of the clot. After cutting out the clot the man died, and an autopsy proved that he had a fracture of the central vertebrae above the point of operation and the cord was pretty well injured at that point, and while as a cosmetic operation it was a success, as a saving clause it was a failure.

FUNCTIONAL DISEASES AND SYMPTOMATOLOGY

J. RICHEY HORNER, M. D.
CLEVELAND

It is the ever present desire of the neurologist to diagnose—to draw a line between diseases—defining the limits of each. One of the most important, as well as interesting, of his duties is to differentiate between organic and functional diseases, to demonstrate those which are symptomatic, not based upon defined pathology, and those whose manifestations are the direct result of organic change, of structural lesion.

To this and original research workers are constantly making an effort to discover a pathological reason for symptoms in evidence in disease, and it follows as a matter of course that the more we know about the results of this original research work the better we are able to apply them in our daily work. Hence it is that not desiring for a moment to claim originality, I present for your thought to-day a short resume of Dr. Archibald Church's study of the research work in neurology accomplished in 1902.

There has been for many years an acknowledgment of the fact that a mental deterioration follows repeated attacks of epilepsy. It has been only quite recently, however, that a loss of mental power is recognized as being associated with purely motor conditions in general. With chorea we find associated an irritability or mental dullness which may progress eventually to dementia. With paralysis agitans there is mental inertia, while with progressive muscular atrophy the intellectual development is defective. This we would rather expect, because where there is a malnutrition of one part of the body there is apt to be a lack of normal condition of another, and following a lack of action of muscular structures there is also a lack of development of the nerve centers. Feebleness, or defect of mind, is associated with pseudo-hypertrophic paralysis. The term proposed for this condition is myopsychopathy or myopsychy.

With regard to a differentiation between organic and functional troubles, several symptoms are mentioned as being conclusive in fixing a diagnosis. These are optic neuritis, optic atrophy, a fixed pupil, hemianopsia, "individual" muscle atrophy, bladder paralysis, with ammoniacal urine, exactly localized paralysis limited to the district of single nerve or plexus. The most important symptom as defining paralysis with reference to its being functional or organic is that when due to the former it is preceded as a rule with shock, fol-

lowed by several days' interval before the paralysis becomes appreciable. In this relation also it is quite proper to call attention to the fact that slight injuries cause pronounced functional paralysis, while pronounced organic changes oftentimes produce only a moderate degree of weakness. It has been demonstrated that in cases of African lethargy, or sleeping sickness, the poison, of whose nature nothing is known, acts especially upon the lymphatic system of the central nervous apparatus.

A very interesting development in relation to frequency of vibrations in tremor and in ankle-clonus has been brought to light, showing that there is tendency to fusion, thus reducing the number of actual vibrations one-half, and accounting for the discrepancy between the statements made by one investigator and those made by Horsley and Schaefer. The latter state that the "automatic action of nerve cells of the cord appears to be capable of originating the rhythm of no greater frequency than ten per second." The latter observer has demonstrated that in paralysis agitans "they obtained large curves at the rate of five and one-tenth per second" and "in disseminated sclerosis they obtained waves at the rate of five and two-tenths per second." The fact that these waves were notched at the top indicated a fusion, so that only alternate beats are demonstrated by the ordinary apparatus and require a special form of instrument to bring them out.

The Heel-Tendon Jerk. 1.—The Achilles-jerk is most easily and conveniently obtained in the kneeling position. The examination in the prone position is more difficult and requires considerable experience, although the results obtained in this position are almost equally reliable in the hand of a skilled observer. 2.—The Achilles-jerk is (probably) constantly present in "health" in persons under 50 years of age. In other words the loss of the Achilles-jerk in a person under 50 years of age (in the absence of any local cause, such as great edema of the legs, which may mechanically interfere with the examination) is always to be looked upon as a sign of organic disease, with the same assurance as loss of the knee-jerk is so regarded at the present time. 3.—In persons over 50 years of age the activity of the Achilles-jerk diminishes with increasing age, consequently in old people its absence, especially if bilateral, cannot be regarded as having the same diagnostic significance as it has in children, young persons, and middle-aged adults. 4.—In the majority of the cases of disease in which the Achilles-jerks are absent the knee-jerks are also lost; *e. g.*, most cases of tabes, peripheral neuritis, etc. 5.—In certain conditions in which the knee-jerks are unaltered the Achilles-jerks are found to

be absent or greatly diminished. Under these circumstances loss of the Achilles-jerk may prove a valuable adjunct to diagnosis. 6.—Since in tabes the Achilles-jerk is usually lost before the knee-jerk, its condition should always be ascertained in suspected cases of that disease (Babinski) and more particularly in those cases in which knee-jerks are present. 7.—It has been shown by Babinski and others that in cases of sciatica the Achilles-jerk is usually lost on the affected side; the loss of the Achilles-jerk proves the existence of a sciatic neuritis. The absence of the Achilles-jerk is for this reason a physical sign of importance in the diagnosis between true sciatica and the hysteric form of the disease. 8.—The loss of the Achilles-jerk caused by sciatic neuritis may persist for years after the sciatica has itself disappeared. 9.—Cases of multiple neuritis are met with in which the Achilles-jerks are absent, while the activity of the knee-jerks remains unimpaired. In such cases the absence of the Achilles-jerk is of value in diagnosis. 10.—It appears probable that the Achilles-jerk is sometimes lost as the result of syphilis, just as the Argyll-Robertson pupil sometimes occurs as a result of that disease unaccompanied by other signs of tabes or general paralysis. 11.—The absence of the Achilles-jerk is sometimes of value in localizing the lesions in the spinal cord or the nerve-roots.

The condition described some years ago as typhoid spine has been practically demonstrated to be due to a periostitis coming on as a secondary disease. An interesting analysis of twenty-six cases was made. Of these, twenty-two were males. The only causative factor was typhoid. Pain was constant as an initial symptom, its appearance varying from the latter part of the run of the fever up to three months after recovery. Lack of bladder and rectal control occurred in one case. Knee-jerks were disturbed in eight. Symptoms of functional conditions were noted in six. Kyphosis was present in eight, generally involving several of the vertebrae.

A number of writers have expressed the opinion that Kernig's sign in meningitis is not always to be depended upon, as in a number of cases of undoubted inflammation of the meninges the sign was persistently absent.

Angina cruris is a name given to intermittent limping, appropriately so because pain is a constant symptom. Some conclusions concerning the condition have been reached by one author and are as follows:

1.—The concurrence of the paroxysmal pains of angina cruris with pulseless pedal arteries is too constant to be explained by coincidence, though it is true that pulseless arteries may be found without the pains, and, conversely, that such pains may appear with apparently

normal arteries. 2.—The painful paroxysms are probably of vascular origin, and result from vascular spasm coupled, perhaps, with increased blood-pressure acting on vessels already partially occluded, whether from local or general disease (aneurism, syphilis), from senile changes (atheroma), or from congenital tendency to angiofibrosis. 3.—Recurring painful cramps of constant seat probably represent a modified form of angina cruris. 4.—It is important to examine the dorsalis pedis and posterior tibial, as well as the radial and temporal arteries, in all cases in which it is desirable to estimate the bearing of the vascular condition upon disease in the central nervous system or elsewhere.

A case analogous to those of angina cruris is recorded, in which there was a painful intermittent paralysis of the upper extremities. No arterial pulse could be found during the attack. The provoking cause seemed to be over-use, the pain commencing in the biceps and radial group of the forearm muscles, then extending to the anterior group. The muscular power rapidly decreased, the arms finally becoming entirely useless.

DISCUSSION

DR. F. C. RICHARDSON: I have nothing to say in criticism of the paper, except I think there is danger in attaching too much importance to single symptoms. For example, the knee-jerk or the various reflexes taken in connection with other symptoms are of vast importance, but of themselves, I think, should be regarded very critically. A number of years ago, while examining a number of people who were in health, quite a number of them students in medical schools, I was surprised to find so many, something like ten per cent., in whom the knee-jerk was absent. I have not as yet been able to investigate the Achilles-reflex, but I am quite sure that in several normal people it has been absent, and I fancy that the same result would be obtained in testing the Achilles-reflex, as was obtained from testing the knee-jerk. The same thing holds true of the plantar reflex. Dr. George Walton of our city, assisted by Dr. Paul, made very extensive researches in regard to this matter and found that in ten per cent., I believe, of all cases tested, something like two hundred, the plantar reflex was absent. In ten per cent. it was present in one foot and absent in the other, which was a thing that had not been thought of at all. I speak of these things simply to show their irregular appearance in perfect health and to caution against attaching too much importance to the reflexes when unconnected with other symptoms.

TELEPATHY

J. T. GREENLEAF, M. D.
OWEGO, N. Y.

Every mind needs relaxation. This is so patent a fact that some one has said, "Tell me what are a man's amusements, and I will tell you what kind of a man he is." But the relaxation of an active mind must be something more than a mere amusement. Happy the man who has a hobby which he can bestride and race off, like a child, into the land of forgetfulness and of peace, without leaving his library, or his easy chair, or his study table. The study of the collateral branches of mental manifestation, or of psychic phenomena, is one that all alienists are fond of pursuing in hours of ease, hence this paper not only as a brief record of some reading, but as the means of commending a little more exhaustive study of telepathy, than has been the habit of many.

The Century Dictionary defines telepathy as "The direct communication of one mind with another, otherwise than in ordinary recognized ways; the supposed action of one mind on another at a distance without the use of words, looks, gestures, or other material signs."

In the history of the study of and experiments with the human mind, much in the way of impressions and ideas received without any apparent employment of the senses as usually understood, has been floating about in the sea of current thought, and when closely examined, these bits of information and fragments of history, bear a very ancient date. The very fact that these manifestations are outside the ordinary means of communication and were generally perceived by only one person, and when that person was alone, makes it very difficult to avoid the element of wilful deceit, and is very apt to cause the man of good judgment and common sense, to relegate such reports to the realm of imagination, and to render the reception of these incidents very cool, and marked with all characteristics of entire skepticism.

Of late, however, as the years have rolled along and the means of communication between trained observers has increased, and the existence of a more scientific and better organized kind of experiment has become more widely recognized, much has been brought to light that has sustained the sharpest scrutiny under the search-light of clearer rules of observation. Not to generalize, it may be well to refer to the 138 cases of telepathic communication which are reported by no less

a man than Camille Flammarion, the French savant, under all the safeguards that a man of science could invent.

Also the numberless cases reported to and recorded by the Society for Psychical Research, in its many volumes of very full and complete reports.

Still further by Gurney, Myers and Podmore, in their work on "Phantasms of the Living" in two volumes.

To these may safely be added the records in the appendix to the posthumous work by F. W. H. Myer, lately published by Hodgson, entitled "Human personality and its survival after death." These records are advanced to prove another point and are all the more valuable on that account.

Hosts of other records have been put forth, but these hereinabove noted seem to be beyond all cavil and to bear the marks of truth and to be entitled to credence.

Telepathy, then, as understood at present, is a real and well verified fact and not the machination of deceit and imposture, not the emanation from a hysteric brain, nor the drivelings of a diseased imagination.

Having established the fact that telepathic communications have been creditably reported and that scientific investigation fails to prove the falsity of these statements, it may be said that about all that is definite concerning this phenomenon has been set forth.

To direct attention to a few of the minor accompaniments of this manifestation of the powers of the human mind, it is now remarked:

First, the phenomenon may be classified as falling under four divisions.

The transfer of sensation:

(*a*) A lady was awakened by a sensation of a blow upon the mouth and was so impressed by it that she sprang from the bed and ran to a receptacle in the room, thinking to eject the blood and saliva that collected in the mouth from the injury, only to find that it was a sensation and that no injury had been sustained. On looking at her watch, she noted that it was 7 a. m. and shortly after fell asleep again. Later on as her husband came in to breakfast she noticed that his lips were bleeding and that other marks of an accident were visible, and learned that at 7 a. m. he had received a severe blow on the mouth from the tiller of a boat that he had been sailing.

The transfer of sound:

(*b*) A simple case will answer to illustrate the transfer of sound. A lady was rendered nervous and uneasy on the evening of December

28, 1879, during a storm of unusual violence. She was at her home and not alone in the house. Suddenly she heard the shrieks of people (not of one person) who seemed to be in dire distress, and running to her mother she related the experience or impression, saying that if there were some great disaster taking place in her immediate vicinity, the sounds could not be plainer, nor could their import be clearer. The next morning she received the news of the fall of the Tay bridge in Scotland, where a train was blown off the bridge and many people perished.

The transfer of visual images:

(*c*) After a social evening function, when everything was pleasant and not at all suggestive of trouble, a man went home, to bed and to sleep, and dreamed of the scenes of the evening, and was surprised to see his brother, who was then on his way by water to India, step out from behind two gentlemen, who were talking, and on being accosted replied that he had been shipwrecked. After a few days news was received of the brother's death in a wreck at sea. There were plenty of details in the report, which went to show that the apparition was not a dream.

The transfer of ideas or emotions:

(*d*) The conductor of a passenger train, after passing a station with all signals set for his run to the next stop, was suddenly so impressed with an indescribable sense of impending danger, that he rang the bell for stopping the train and went forward to examine the engine and to ask the engineer if all the signals were indicative of a clear track. While standing on the track, he sent a flag forward as well as back and was startled by a whistle ahead of him sounding for "down brakes" and as the train came in sight he was met by the conductor of the other train, asking for the reason of his being on that part of the road. On investigating, it was revealed that the train despatcher had blundered and that the catastrophe was averted by this telepathic influence or impression.

Still further, it is quite safe to assert that these telepathic transferences have been between those who were intimately acquainted. Also, with only a few exceptions, this phenomenon has been involuntary on the part of both the agent and the percipient. Again these manifestations generally occur when there is some peculiar stress or excitement on the part of the agent.

Very many of the cases reported by Flammarion have to do with impressions of the fact of the death of a near and dear friend.

Just what is the requisite condition of the mind of the percipient, can not yet be defined. One thing, however, is sure, that the part

of the mental and moral nature or realm called the subliminal self must not only be free from the ordinary trammels and inhibitions of the physical economy, but there must be some powerful incentive to the transference of thought or sensation of some kind.

This brings us to the consideration of the matter of what is called induced telepathy. Can a thought, or sensation be transferred telepathically at will? Have we the power to influence other minds without the usual means of transference?

The experiments of Podmore, of Holmes, of Meyer and a host of others, prove this beyond the possibility of a doubt. By concentrating the mind and will upon the person to be acted upon and upon the idea or sensation to be conveyed, the percipient can be influenced.

Dr. Thompson J. Hudson of Washington, D. C., has put forth what he styles a "working theory" for this, as well as other physical phenomena, that is interesting if not entirely correct. Briefly stated, he reverts to the old idea of dual mind or a double self. The one objective and controlling, affected by reason and limited by physical surroundings, the other subjective, intuitive, not controlled by the usual limitations of life. When possible for the subjective self of one person to be free from its accompanying and dominating objective self, it is possible for it to disregard space and time and to communicate with any other subjective mind that is also free from its surroundings.

This accounts for much that is reported in telepathic manifestations, including the induced telepathy that has been studied.

The whole problem thus partly solved, brings the investigator to this proposition: "If one mind can influence another when the conditions are correct, will it not be possible for the physician to influence the neurasthenic, or the dipsomaniac, for his or her good in this way?"

At all events, it seems quite well established that there is much reason for an affirmative reply to this proposition. Still further, if this is so, how it opens out a sphere for the alienist to examine and employ in his beneficent work.

Not to obscure the general understanding of the employment of telepathic influence, it may be well to add that it must not be confounded with hypnotic suggestion, either in the trance state or in the condition immediately preceding and leading naturally to the trance, because in these instances the sense of sight and sound are both enlisted in the work, while telepathy, true to its definition, is found to exercise its power without sight, sound or any of the ordinary means of communication.

DISCUSSION

DR. D. D. NALCHALJIAN: I wish to state that about ten years ago I had a similar experience to what was related in the paper. One day I left home, where I was living and went to a distant place to do some work. While I was working I suddenly had an impression that something had happened at home, and I told my friend with whom I was working that I felt as if something had occurred at home. He laughed at me, while I insisted that something was wrong, and could hardly go on with my work. After we had finished the work and had returned home I found that one of my children had met with an accident, and while washing dishes had fallen and struck her head, making quite a severe wound, and had fainted. There was no reason for me thinking of the home-folks, as they were all right when I left home, and no occasion existed for me to feel anxious. I thought of the daughter when she was hurt, and she expressed herself to me afterwards that she had thought of me at the time of the accident. I know of one other incident along the same line. I believe there is something in telepathy which we do not fully comprehend, and which should be thoroughly investigated.

DR. E. B. HOOKER: I have learned to look with much doubt upon these reports of instances of telepathy, but I believe it would be a very interesting thing to have reports made from year to year of these instances. I have had some very strong impressions myself, but after using every means possible to verify them, I have not been able to secure a foundation upon which to base the belief that these impressions have been anything but coincidences. And this we must be extremely careful in noting if we expect to learn of the value of these things. I am not impressionable at all, yet I believe in telepathy, and am sorry that I have been unable to secure a foundation upon which to build, and feel that we must discriminate closely in order that these reports may be of value to the student of psychology in the future.

THE PRESIDENT, DR. DELAMATER: Is there any further business to come before this society at this session? If not it will stand adjourned.

As a final word I want to thank the members of this Society, and the members of the Institute for their presence at these meetings, and especially do I desire to express my thanks to those who have taken part in the discussions and have helped to make this meeting a success.

There being nothing further to bring before us, we now stand adjourned, *sine die.*

1755-1843

MEMORIAL SERVICES

COMMITTEE

EDWARD BEECHER HOOKER, M.D.
Chairman

O. S. RUNNELS, M.D. C. B. KINYON, M.D.

MEMORIAL SERVICES

Memorial services for deceased members were held at the Hotel Somerset, Friday evening, June 25, Music was rendered by the Harvard Male Quartette.

The meeting was opened by the Chairman, DR. EDWARD BEECHER HOOKER, who called upon the REVEREND JOHN SNYDER, of Wellesley, Mass., to invoke the favor of Deity.

INVOCATION

Great and Merciful
Heavenly Father,
We ask this night
Thy blessing on
All sorts and conditions of men;
Especially those belonging
To the great Church
Of the Living God;
All who are following
In the paths of peace;
All who are striving
To follow Christ.

We thank Thee
For those who have
So nobly given their lives
For this great cause—
The alleviation
Of human suffering.

We thank Thee
That they have been enabled
By their power over the ills
Which affect the body,
To heal the sick.

We thank Thee
For these noble men
And women
Who look into the face
Of Nature
And study her great problems
In order to bring
Joy and peace
To the great human family.

Now, Father, we would pray
That those who have finished
Their work
Here amongst us
During the past year
May enter into that
Peace with God
Which passeth all understanding.

May the influence for good
Which they have left,
Go on and multiply
An hundred fold,
And as, day by day,
We see the chairs about us
Vacant,
May we be deeply impressed
With the feeling
That we have here
No continual city, but that
We seek one to come.

As we go on we do not have to
Look into the future
Without Thee.

And may we ever look into
Thy face for light in hours of darkness,
And when we finish our work
Here, may we all hear the
Word of God, saying to us:
"Well done, good and faithful
Servant; enter thou into
The joys of Thy Lord."

We commend ourselves to
Thy care, and ask
Thy blessing to rest
Upon us. AMEN!

The report of the Necrologist, Dr. C. A. Weirick, giving the names of members deceased, was read, as follows:

SENIORS

TIMOTHY FIELD ALLEN, M. D., New York, N. Y.
AARON BALDWIN, M. D., Washington, D. C.
ASA WHITFORD BROWN, M. D., Providence, R. I.
MARTIN DESCHERE, M. D., New York, N. Y.
THOMAS C. DUNCAN, M. D., Chicago, Ill.
WILLIAM M. GRIFFITH, M. D., Philadelphia, Pa.
AUGUSTUS NEGENDANK, M. D., Wilmington, Del.
RUFUS SHACKFORD, M. D., Portland, Me.
EDWARD P. SCALES, M. D., Newton, Mass.
NORMAN GETMAN, M. D., Richfield Springs, N. Y.
CHESTER W. SCOTT, M. D., Lawrence, Mass.
BUSHROD W. JAMES, M. D., Philadelphia, Pa.
LESTER M. PRATT, M. D., Homer, N. Y.
TULLIO S. VERDI, M. D., Washington, D. C.
NANCY T. WILLIAMS, M. D., Augusta, Me.
ALFRED W. WOODWARD, M. D., Chicago.

HONORARY MEMBER

THEODORE KAFKA, M. D., CARLSBAD, GERMANY.

JUNIORS

THOMAS DOCKING, M. D., SAN DIEGO, CAL.
RUSSELL FAY, M. D., YONKERS, N. Y.
FRANKLIN A. GARDNER, M. D., WASHINGTON, D. C.
CHARLES E. HOUSE, M. D., CANTON, OHIO.
LEONARD KITTINGER, M. D., WILMINGTON, DEL.
DAVID MCCLELLAN, M. D., WEST HOBOKEN, N. J.
JOHN MILLER, M. D., BUFFALO, N. Y.
FREDERICK A. REMINGTON, M. D., SIOUX CITY, IOWA.
ROBERT N. TOOKER, M. D., CHICAGO.
BARTUS TREW, M. D., BALTIMORE, MD.

MEMORIAL ADDRESS

EDWARD BEECHER HOOKER, M.D.

Another year has rolled around and the American Institute of Homœopathy has come again to another of its homes. Though homeless, the Institute is always hopeful, when it sets out each June on its annual pilgrimage, that its welcome will be cordial, its stay pleasant and profitable to both hosts and guests and that the parting word will be spoken with a tinge of sadness on both sides. Though aged, the Institute is not old, indeed, each spring it experiences the fever of youth and becomes restless as the days grow warm and the leaves and flowers put forth. When the roses begin to bloom and a flood of crimson sweeps over the land from south to north its eagerness knows no bounds, for it knows that the day of its departure is at hand and that once more it is going home.

With more than usual hopefulness we set out this year, for we were going to Boston. What emotion the name stirs in every heart! What patriotic American does not thrill as he thinks of the events that have taken place near Boston, come he from the far Rockies, the Sunny South or the Great Lakes, or be he Yankee or Metropolitan. Wherever he lives he has ancestors that came originally from this region, which is so closely connected with the settlement of the country and the birth of the Nation. Plymouth Rock, Bunker Hill, Concord and Lexington are names dear to every American, and to visit these spots is to many

a privilege that occurs but once in a lifetime. But whatever our anticipations they have been more than realized. In one respect only have the inhabitants of this famed city not lived up to their reputation—there has been none of that frigidity which is commonly believed to be characteristic of the true Bostonian. On the contrary, such open-hearted hospitality has been lavished upon us, we have been met on all sides with such warm friendliness, that we shall henceforth know the people of Boston as they are, courteous hosts, from whom refinement and culture have not taken away the lovable traits of human sympathy and kindness. And so, on this last night, we meet with a tinge of sadness, certainly on our part, and we hope so on that of our hosts. But the sadness is not wholly because the parting words will be spoken soon, but for other reasons as well. We see not here faces we looked upon a year ago. There are many trying experiences in a doctor's life; he has to forego pleasures that other callings enjoy, and endure disappointments and anxieties that are peculiarly his own. But after all it's a grand life, and who that has really entered into it, becomes filled with the spirit of the true physician and warmed with the glow of fraternal feeling for his comrades, would leave it? Among the greatest pleasures of our lives are these annual meetings of the Institute, when we meet old friends and make new ones, and are drawn closer together as the years pass by. May we ever be loyal comrades, and however much we may differ in our points of view, however much we may be apart in methods, however earnest we may become in discussion, let us still be faithful friends and respect each other's honest beliefs. Doctors are sometimes quarrelsome, local jealousies and quarrels will occasionally occur and wax bitter. These are to be regretted, but if they do exist keep them at home, and never bring them to the Institute. This is the place for scientific work, earnest discussion and comparison of result, for good fellowship and warm friendship, not for animosity and bitterness. And never before to my knowledge has a session of this body been more harmonious. The chill without has been unable to overcome the genial warmth within, and without a contest we have elected our President for the coming year.

But as the years pass by we miss familiar faces, and cannot grasp the hands of some we long have known. Of the founders of the Institute in 1844, not one is now living, and one by one those who bore the brunt of the fight forty or fifty years ago are falling out. The old guard is passing away. Are we worthy to be their successors? It is a precious privilege to speak the names of Gray, Hering, Lippe, Guernsey, Dunham, Ludlam, Talbot, Helmuth and Allen. The founders of this Institute and its early members had certain characteristics which distinguished them pre-eminently—they believed and they were in earnest. Theirs was no doubtful, wavering faith nor fitful purpose. It is hardly possible for the men of one generation to hold exactly the beliefs of those of preceding generations, but enthusiasm and earnestness of purpose are possible to every age. Would that we today might have these characteristics of the fathers!

During the year that has passed since we met in Cleveland, twenty members of the Institute have passed from this life to the life eternal. It is fitting that we shall pause a moment in our work and in our play

to honor their memory. During the past few days we have been intent upon the duties of the session; business of vital importance to the prosperity of the Institute has been under consideration, and subjects bearing upon the welfare of the race have been discussed, and recreation has followed close upon the termination of work, with hardly time enough to do justice to either. We come now to the quiet hour, the hour set apart to the memory of departed comrades, to all who were once of this body, especially to those who have been called to higher labors within the year. These services are not, however, funeral exercises. We come here not to lament because they have died, but to rejoice that they have lived. This is the central thought tonight—not death, but life. Not that they have ceased to toil with us, but that they accomplished so much and that life is ours, we know not for how long, and that we must therefore make the most of it now. Even in this quiet hour, when time does not press, I cannot speak in detail of our departed friends, worthy though they may be of individual mention, successful their work and tender their memory. In one way or another they have built for themselves monuments throughout our broad land. I would like to dwell upon Alfred W. Woodward, the Massachusetts boy early transplanted to Illinois, who served his country as a soldier in the civil war, and then for nearly forty years served her no less in civil life by healing the sick in the great city on Lake Michigan. I should like to speak at length of Robert N. Tooker, of the same city, a man of most lovable disposition, sensitive in nature, considerate of others, yet immovable in all matters in which principle was at stake. His teachings and his writings, lucid and forceful, have had a wide influence upon the profession. Would that I could recount to you in full the story of the brilliant young Italian, Tullio S. Verdi, the lover of liberty and the friend of Garibaldi, who served gallantly as a soldier in his native country in its struggles for national independence, and then came to the land of freedom to make his home here. Landing on its shore with but five dollars in his pocket this resourceful young Italian succeeded in supporting himself and obtaining a medical education. Settling in Washington, he soon became prominent in medical circles, occupying official positions and securing a large and influential practice. A tireless, courageous worker, he did much to bring homœopathy into its present honorable position in the Nation's capital. It would be a pleasant task to speak in detail of the life and labors of Bushrod W. James, who for upwards of fifty years practiced medicine in Philadelphia. Physician, surgeon and specialist, faithful in attendance at the Institute, ready in debate, a voluminous writer and careful historian. Well would it repay us to linger awhile over the memory of Martin Deschere, of New York, whose clear and penetrating mind eagerly sought for truth and lucidly explained it. Positive in his own convictions, tolerant of those of others, genial, unselfish, he was indeed a rare man, whose life is a model which we may well copy. It is painful to pass with but brief mention that unique figure in the life of the Institute, Nancy T. Williams, of Augusta, Me.; she who loved much and out of her small means gave much. She was the most generous contributor to the building of the Hahnemann monument, most generous in the amount she gave and in the spirit in which she gave it.

Out of the fullness of her heart she almost emptied her purse, and when she died left all that she had in trust to the Monument Committee. Peace be to her memory! And if in that other land they do see and know, as we believe they do, I am sure that as she crossed the dark river and came out into the light the hand of Hahnemann was stretched out to welcome this faithful disciple. I count it a privilege that I have held her hand and looked upon her homely, beautiful face.

Most of all should I like to speak of Timothy Field Allen, skilled in natural science, of broad culture, a close student and indefatigable worker. His labors were immense. As a writer, as a teacher, as the executive head of college and hospital, no man in our ranks exerted a wider influence and no man could be less easily spared. Of spotless character, cheerful disposition and sympathetic nature, he endeared himself to all who came in contact with him. Hundreds of young men who sat under his inspiring instruction are better men and physicians because he lived, and because of his labors the science of therapeutics was materially advanced.

Thus briefly has it been necessary to allude this evening to but a few of our departed comrades, for the trened of our thought tonight is not so much of lives as of living. How can we best make these services a memorial not only to the friends who have left us during the year but also to the larger number, that noble company, whose ranks have been filled by comrades called from ours for more than half a century? Shall we make this evening simply an occasion to do honor to their memory? No. Let us honor them by dedicating ourselves anew to the tasks yet unfinished. Let us take counsel together how we may make our lives more useful, how we may make them nobler. We build memorials to the dead in the shape of hospitals for the living, beautiful buildings for educational purposes, noble institutions for the uplifting of the poor and downtrodden; let us this evening turn from the dead to the living, from their struggles, now happily over, to our struggles, from their lessons to the lessons we are learning; let us make them our memorial to them an effort to lift our beloved profession to a higher plane, to hold out lofty ideals and show the possibility of attaining them. Let us consider, then, our relations to our patients and to the public. To do this successfully we need to see ourselves as we appear to ourselves and also as we appear to others not of our profession. To this end you will presently have the pleasure of listening to an address upon "The Relation of the Physician to the Public," from the physician's point of view, to be followed by an address upon "The Relation of the Public to the Physician," from the point of view of the layman.

ADDRESS

THE RELATION OF THE PHYSICIAN TO THE PUBLIC

JOHN PRENTICE RAND, M. D.

LADIES AND GENTLEMEN: There is no death; what seems so is transition!" was the inspired utterance of our greatest poet. This

thought I am sure the Memorial Committee had in mind when they planned out and arranged the program for this evening. It is not a service for the dead but for the living—and those whose familiar forms we see no more are still living. Their names are still upon our catalogue of teachers. We read their works. We heed their admonitions. We emulate their example. The Reaper came and found them all ready for the harvest and gave to each promotion—an emeritus degree. For them it is a season of rest. For them it is a time for congratulation, and though we miss them sorely from our ranks, we will not voice one sad discordant strain. The future is still before us. We are still brought face to face with "all sorts and conditions of men," and we must meet these conditions wisely if we ever expect to achieve success.

And so tonight I have been asked by the Memorial Committee to say a few words upon "The Physician and His Relation to the Public." The task is a trying one, for however much I might wish to do the subject justice, the time is too short, and I can only touch upon a few of the most salient points.

And first we must acknowledge that the physician shares the common obligation of good citizenship towards the community in which he lives.

The physician owes it to the community to be a man, to stand up and vote and let his vote be counted; to become a candiate for office even, for positions where medical training is required. He must be indeed a poor observer who could have practiced medicine for a period of years and not know, better than the average citizen, that, in the catechism of health, dirt, dissipation and death are one. The people must be taught that disease is no accident, but the result of inexorable law, and the physician should be foremost to do it. Of what use is preventive medicine? Of what use is sanitary knowledge, if the one who has it keeps it all to himself? I grant that such is the physician's option, but can there be any attitude more ungracious?

To glean and sift, and horde from the accumulated experience of the ages, and then bring nothing in return? Success in greed is worse than failure. Well did the old poet exclaim:

> That man may last, but never lives,
> Who much receives, but nothing gives,
> Whom none can love, whom none can thank—
> Creation's blot, creation's blank.

I hasten now to a relation so sacred that its sanctity is even admitted by the courts, and that is the obligations of a physician to his patient. The patient trusts his all in our hands. We are his confessor, and we owe to him not only secrecy, but the very best attention we can bestow. Our obligations to our patient are paramount. I say it, and I say it deliberately, as much as we may desire to help ourselves or our professional friends, our obligations to our patients come first. We must do for them the very best things possible, and at all times, without pauperizing them, put them in a way to obtain the best their circumstances will afford; and not only that, we must be considerate. How much better is it than stealing to make a man believe he is ill for the sake of treating him? Some one has said, "The demand of

the highway robber is: 'Your money or your life!' but the quack doctor takes both."

And speaking of quacks reminds us that it is not the itinerant physician alone who should be classed under this head. Webster defines the word as, "A boastful pretender to medical skill." I know of no reason why a graduate from Harvard, who knowingly and deliberately lays claim to the impossible, is not as truly a quack as the ignorant advertiser.

That physician who, in the present state of medical knowledge, claims to cure *all cases of cancer* or consumption, or even *all cases* of the most trivial disease, has outstepped the bounds of professional decorum, and deserves to be stigmatized as a pretender or something worse!

I could write a whole chapter upon this one phase of medical ethics—the Legalized Quack. There is no one in the community from whom an unsuspecting public suffers so much. He buys books, but not to read them, and displays instruments he knows not how to use. As a class he infests the air around him with a needless pathophobia, and then quiets his terrorized victims with assurances of cure. In the whole range of professional criminals, excluding, perhaps, the dishonest priest who uses purgatory as a means of extortion, there is none more contemptible than an unscrupulous physician who frightens his patient to rob him of a fee.

And yet there is, or should be, a reciprocal relation of the patient to his physician upon which if you will bear with me I wish to speak. I have already alluded to the ideals of the profession, and however far we may fall below the standards set for us by our patients, we are still farther below our own. We see ourselves in one light—our patients see us in an altogether different light—and both we and our patients would be greatly helped if we could but look upon ourselves from the other's standpoint. Devoutly we pray with Scotland's inspired poet:

> Oh, wad some power the giftie gie us
> To see oursels as ithers see us!

To those of us who have read John Watson's masterful delineation of "A Doctor of the Old School," and then attempted to measure our standards by the ideal relations that existed between him and his patients, must feel, I know, abashed if not actually unfit to practice medicine.

Think of a community in which the physician did not deem it necessary to keep any written accounts of his business, but trusted all of his financial obligations to his own uncertain memory and the scrupulous integrity of his patients! Drumtochty and the Celestial City could not have been so very far apart. With patients like those, bookkeeping would be made easy and "collecting agencies" unheard of.

Dr. Watson's dream of the ideal physician, however, is sometimes realized, and here and there among our New England hills are patients as truly worthy of commemoration as his. But the real and ideal are often widely separated, and until our social standards are altogether different from what they are now, physicians must be men of affairs and conduct their business upon business principles.

The patient demands that his physician should be up-to-date, equipped with the most approved appliances for the treatment of disease, and yet he keeps his cupboards filled with patent nostrums and begs a copy of every successful prescription he can get, to avoid the necessity of some future consultation and the resulting fee.

Patients have even been known to buy extravagant theater tickets when their doctor's bill was unpaid, or to ask their physician to wait for the pittance due him until they had returned from some fashionable watering place. I know that, many times, the physician is at fault for unsettled accounts as much as the patient. He doesn't send his bills promptly, he doesn't act as though he cared whether he was paid or not, and soon the patient begins to feel and act in the very same way. And yet there is a business relation between physician and patient which must be recognized. Money cannot pay, oftentimes, for the service rendered—but it does help to grease the wheels of the professional chariot and keep it going. The patient desires the service of which the physician is capable. Let him show his appreciation by paying his bill! It will create good feeling, it will assure prompt attention, it may even fulfill the vision of the poet, Emerson, who wrote:

> Wouldst thou seal up the avenues of ill,
> Pay every debt as if God wrote the bill!

Another problem, close bordering on the financial relations of physicians and patient, is the part that our free dispensaries and hospitals play in the treatment of disease.

To get something for nothing is human, and the profession is as much to blame as the laity that the abuse of such institutions exists. But the people should bear in mind this fact: Dispensaries are not established for those who are able to pay, any more than soup kitchens are opened for those who can buy food. They both have a most important mission. They belong to the poor and the unfortunate, but when they are made to subserve to the penuriousness of the rich they become a travesty upon charity, for whose dear sake they are supposed to exist.

So much for the financial relation between a physician and patient, now for the ethical one. It has often been a surprise to me how little consideration the average individual exhibits toward his medical attendant. In the majority of instances I believe it is more the result of thoughtlessness than anything else. When a person is ill and decides that he wants a doctor, though it may have taken him days to reach that decision, he wants him at once. His order is but the expression of this desire and usually takes no account of a physician's convenience or health. It reads: "Come at once!" "Come immediately!" "Come as soon as possible!" when there is really no necessity for haste. Many a time have I left my dinner untouched and responded at once to such an appeal, only to find a teething baby or a person who had been carrying a hard cold for a week, and who had decided to quit work and stay at home.

I know it is impossible for a patient to use what he does not possess, but from a physician's standpoint it does seem as if a person who was sane on everything else might use a little common sense in leaving an

order for a physician. If the case is not a critical one, do not say "Come as soon as possible"; say, "as soon as convenient," and the chances are that you will be served as quickly and as well.

And now just one suggestion on whom to call. Don't call a physician because he is related to you by the ties of birth, marriage, or business associations! You will almost surely regret it, if you do. If there is more than one physician within your reach, select the one in whom you have the most confidence. If he cannot be had, and you cannot wait, call in someone else and explain to him why you did it. If the physician called is a gentleman, he will withdraw from the case when the family doctor returns. If he is not, teach him that you know something of the medical ethics by settling his account and sending for the physician of your choice. By so doing you will have dealt honorably with all and preserved your inherent right to select your own attendant.

When you go to consult a physician, trust him. Don't try to fool him with some hatched-up story as to how you caught your disease. And if he nods his head and says, "Yes, yes," to all that you tell him, don't flatter yourself that you did it. The chances are his "Yes, yes" means to acknowledge that he understands you, and is no evidence of belief.

If a patient is critically ill, wait until the doctor is out of the sick room before plying him with questions. The doctor will tell voluntarily all that is best for the patient to know, and to put him under cross-examination in the presence of the patient will surely do more harm than good.

Most physicians are glad to take the relatives into their confidence, if it can be done without disturbance or injury to the patient, but to take the relatives of some people into one's confidence would be like setting "bedlam" loose.

If for any reason the patient is not progressing satisfactorily and consultation is desired, say so to your physician at once. It may be that he is waiting for you to take the initiative in the matter. If there is some particular physician whom you desire, tell him that, and he can easily assent to your desires or withdraw from the case. If, on the other hand, your doctor asks for counsel, it is usually for the advantage of all to allow him to select his own.

If you have confidence in your physician you will obey him, of course, although I have observed in my professional career that people are much more inclined to take medicine than advice. Someone has said that advice is like an old-fashioned dose of castor oil—"more blessed to give than to receive," and I am inclined to think the observation is correct, especially when the busybodies in the neighborhood rush in with all their cure-alls and implore the poor distracted patient to give them a trial. Such trials are not sanctioned by the best medical authorities and are rightly condemned by the physician in attendance. I do not mean to imply that the neighbors are unkind. Oftentimes their suggestions are of great value, but the doctor called is responsible for the treatment, and no remedy or expedient should be attempted without his knowledge and consent.

And right here I wish to remind you that most people do not wish their infirmities made public. They tell their physicians, or are supposed to, from necessity, but no earthly consideration would tempt them to tell anyone else.

The physician's mind is a sort of Safe Deposit Co., with a private box in it for every patient. The patient has intrusted his dearest secrets to his professional care. Isn't it mean for the neighbors to "hold up" the physician as soon as he leaves the house and demand what was put into that box? Think of the awkward position into which the physician is placed! If he tells the truth, he betrays his patient; if he refuses to speak, the inquisitor at once gains the impression that the nature of the malady is ten times worse than it is, and oftentimes the physician is actually compelled to confess all, or lie outright, to protect his patient from vituperous slander.

But let us turn to a brighter picture. I know it is a joke, but yet it has been repeated so many times that people have almost come to believe it, and that is that physicians have no ideals of professional honesty, that medicine is a trade and that the "almighty dolar" is all they are after. Almost the first satire I ever committed to memory was a bit of composition "The Doctor's Prayer," which ran something like this:

> O Lord, make the sick ones all well,
> And the well ones all sick!

Such a petition would undoubtedly be answered in time, especially the second part of it, but I wish to call your attention to the fact that the attitude of the medical profession toward the community at large is a most philanthropic one.

How does a doctor get his living, not to speak of laying up a dollar for a rainy day? Simply by the practice of his profession One-half of his business at least comes from the so-called preventable forms of disease. If a farmer should make one-half of his profit from the production of wool, do you suppose he would join hands with the lawmakers to prevent the raising of sheep? If a trader should make one-half of his profits from the sale of tobacco, do you think that he would vote to have smoking prohibited by law? And yet the medical profession is doing this very thing! I do not know how it is in all parts of the country, but in Massachusetts a man can't spit on the floor of a street car? Why? Because physicians have told the lawmakers that consumption is communicated in that way. If a man is sick with a contagious disease, he is shut up in his house, and his family with him; if he dies, he is not allowed a public funeral, his body must be buried at once.

The organization of our State and local boards of health is but an attempt on the part of the public to carry out the instructions of the medical profession for the prevention of contagious disease. Every physician, in the humble round of his daily duties, is doing the same thing—and yet we are accused of unworthy motives.

I wonder if the people realize that a physician is not allowed by his code of ethics to hold a prescription secret or obtain a patent upon a surgical instrument. Is there any other fraternal organization on the

face of the whole earth that would declare it derogatory to the good standing of a member to receive a royalty from a beneficent device? Remember this when the taunts of avarice are hurled against physicians, that whatever may be said of an unworthy example, the profession itself stands on holy ground.

The true physician is genuine. I care not if he be the Dean of a University, or the humblest practitioner upon our rugged frontier. His patients can intrust to him "their lives, their fortunes, and their sacred honor." He will accept no bribes. He will divulge no secrets. He will be hopeful while there is room for hope, and when the inevitable comes, as come it must, and the poor unfortunate wishes to know of his condition, he will tell him the truth, and why not? If a man is about to die, why keep it from him? There may be something he may wish to say or do before he goes. I know not what the future may have in store for any of us, but if immortality be true, and if it be indeed true that we shall meet and know our friends beyond, how can any of us ever face our once confiding patients when the last thing we told them on earth was a lie?

Just one more thought and I am done. Sin is nothing more or less than violated law. In the realm of our physical bodies sin and disease are one. The Great Physician was a friend of sinners. He healed the sick, He cast out evil spirits, He pointed the way to a better life! In like manner every true physician is a savior to mankind. He may not accept the Theory of Evolution, the dogmas of the Church may seem to him like idle tales, and yet in his efforts for suffering humanity he is working with God, and through God, and for God.

"One touch of nature makes the whole world kin." "The human form is the form divine," and he who would seek for holier service than comes to those who labor for their kind will seek far, aye, and seek for it in vain.

And now for the practical application of my theme. I have spoken thus far from a physician's standpoint; bear with me a moment more!

If you have any real appreciation of your medical attendant (or of anyone else, for that matter), show it to him while he is alive. In the whole of John Watson's beautiful narrative there is not a sadder commentary upon opportunities past than when Jamie Soutar breaks down at Dr. MacClure's funeral and exclaims: "But woe's me that fouk' 'ill tak a man's best work all his days without a word, an' no dae him honor till he dies! Oh, if they had only gethered like this juist aince when he was living and let him see he hedna labored in vain! His reward has come ower late!"

Yes, appreciation is a physician's best reward. It is not alone the poor man's currency, the rich can bestow it as well. He needs it when everything goes right, but oh! when all his efforts fail, he needs it most. You do not suffer alone. Think of this when sore bereavement o'ertakes you, and if you can honestly say to your medical attendant, "I believe that everything was done that could be done to avert this calamity," say it, and grant him the blest assurance that his labors were not wholly in vain.

I have thus indicated, in a cursory way, some of the obligations that rest upon both physician and patient. Ability is but another name for responsibility, and the cause we have espoused implies both.

It is meet that a physician should magnify his office, for there is no one in the community whose relation to the public is so vital as his. Yes, the physician's office is sacred! He stands at the "alpha and omega" of life! He watches its fevers of summer and its chills of winter! Where the colored card warns the people of an insidious danger his duty calls him to go! Where the plague and pestilence abound—

> He dares a fate the bravest well might shun,
> Nor finds reward, save only Heaven's—well done.

THE RELATION OF THE PUBLIC TO THE PHYSICIAN

PROF. FLAVEL S. LUTHER

MR. CHAIRMAN, LADIES AND GENTLEMEN:—The writer already quoted to-night has pointed out the peculiar pathos of a physician's death. As I recall the words my mind goes back a long way into the past, thinking of the most pathetic death-scene in all history, about which were gathered only a few who could be called friends. All the rest who were there had no purpose except to mock and deride; and these, with that vision of truth which comes unknowingly and unconsciously at such a time, cried out: "He saved others, himself he cannot save," not understanding that if he had tried to save himself he could not save others.

I presume it has been thus with many noble men of your profession; they could not save others, as they doubtless did, if they tried to save themselves.

I know not one of the names read here tonight, but these men must have lived the lives of brave men. And because my friend, Dr. Hooker, has spoken so beautifully of these men, I know they must have lived self-sacrificing lives. They did not strive to save themselves, but did their duty, and in doing this emulated the example of the Great Physician, Jesus Christ. I cannot help thinking that the speaker who immediately preceded me perhaps does not understand how we do appreciate and regard those who administer to us in the time of sickness. I remember that pathetic lament of Jamie Sontar. It is a beautiful passage; and yet, the people had shown the doctor how much they loved him, many, many times, in word, in look, in tears of gratitude, in the love of little children of the Glen, in the strong hand-clasp of rugged men—all these were to William MacLure, perhaps, gratitude enough. No, sir; you must not think we do not appreciate the services of the physician. We are human, that is all; we are forgetful many times, but beneath all these things there is a deep and heart-felt gratitude for what they do for us. We thank them for the devotion they show for the people. We thank them for bearing with us when we are sick, and if sometimes we seem fretful and exacting, they must remember that we are not ourselves. If we said, "Come quickly!" when nothing serious was the matter, why, we were scared! A sick

man cannot be held responsible for what he does and says, when he is suffering. He is not himself. He is battling with baccilli and ptomaines and they are doing all sorts of evil things, and making him wretched for the time being, and all the life that is in the man calls out for somebody to come and come quick. The physician ought to understand that. Of course, the physician knew before he went to the medical school that he would lose his dinner many times. The doctor understood, as a matter of course, that he would be wanted many a time when there was no real need. When we are well, we are like another individual, and then we thank the physician and we pay him (if he will give us a little time), and we say that we will call him again.

For my own part I must speak to you of The Relation of the Public to the Physician from the standpoint of one who has never been a patient. I cannot say that I never consulted a doctor, but no physician has ever kept me in bed for twenty-four hours since the dawn of my memory, so my position is that of a man who up to this time has been and is habitually well. What I want of the doctors, and what I think we all want of the doctors, is that they keep us in that blessed condition. I believe that the doctors cure us when we are sick with increasing certainty. They have got so now that they study those little bacilli in some sort of a culture bed; they say that is the way to study disease. The disease is all right while it is there. They are studying the habits of the germs in laboratories. Well, I have always been a believer in the laboratory method, and I sincerely hope they will keep them in the laboratory, and not let them get out. Oh, medical science is advancing, and the doctors are taking better and better care of their patients. And there is great improvement in nursing and care of the patient, and they do not use so many of these nauseous drugs as they did when I was a boy, and they do not keep on giving medicine when the patient is well and no longer needs attention, and the microbes have been driven out, and the ptomaines have followed them.

But now there are two other problems which, when we reach the ideal world, will have been solved by the physician. First, the great problem of keeping us well. Dr. Rand has spoken eloquently and very truly and practically of how the physician destroys his own business by carrying on the noble work he does for the sake of the public health. There are others who do the same. No clergyman, no physician, no lawyer, who is doing his whole duty, can but do his part towards the general welfare of the public. I believe the best of the doctors are trying to do this, and the worst of them do not actively desire not to. Some doctors have a great deal of human nature. "Human nature is much the same in all ages, but never more so than at present." Human nature is much the same in all professions, and perhaps much more so in the medical. The physician who is great, whose diagnosis seems to be the result of inspiration, whose understanding of the patient's constitution (I don't know what that means) seems miraculous—such a man's service cannot be measured. Whatever fee he gets is little enough. If any amount of money which is paid to a physician measures his desert, he is not a good physician. The great physicians make great fees, they acquire large fortunes, but that

does not pay them. Now are these the men who are on the boards of health in our cities? Is it the prominent physician who is on the board of health? No. You go into any city, and you will find that it is one of the younger and less able men who does that work. Are the leading physicians the leading men in the boards of health? I know they are not. You must know that they are not. Now we want the great physicians to take hold of this, but if they do this they have to sacrifice a good deal of money. I hope they will do what is best, and see that this work is done the best that it can be done. They will be turned down by some petty municipal officer; they will be made sport of, scorned and misused in editorials in the newspapers, but I hope they will fight it out along the best lines for the public good, and see that the work is done in the way it should be done. That, then, is the first suggestion. I make this plea on behalf of the great public, that the great doctors, the best doctors, shall personally take up this work; that they get together and see that this work is done as well as modern science can do it. I know the physician is nobly doing his duty now, that he is not a man of sordid motives by any means, but he has become a very busy man, and grown away from the public need. That is point number one.

Another thing. I am convinced that the physician has brought it about that the average length of human life is increased. I am willing to give him full credit for this more or less desirable result, but I do not think that he has yet brought about the best way to develop strength and endurance. Now perhaps some of you may be surprised to hear this statement from me, but I think the average strength of young men and women is not what it should be. The medical profession may have increased the average length of life, but they have not yet prescribed a way of life that tends to develop enduring physical strength. I can make this statement very well here, because nobody can talk back. When you consider that men and women are able to stand a cold wind and not get cold, who can stand a little night work and come out all right, there are more of them over 40 than under. I do not think that the average physical condition of boys and girls in college is equal to that of their fathers and mothers at the same age. So I ask this of you doctors, that you shall make us strong all the time; that you shall make our boys and girls stronger than they are.

You may say they are strong enough, and not nervous, not afraid of a little examination in school, that they can stay in school a few hours without having the headache. Well, I should be glad to be convinced if I am wrong in denying this, but I do deny it. Physical labor has been put out of sight by labor-saving machinery, but our boys and girls must not be allowed to deteriorate physically. Gymnastic exercises have certainly not produced the effect that they should. I bring this matter before the attention of you physicians with the hope that you will try to bring about the proper physical development of our youth.

Just two things more. Within a few years there has come very prominently before the public some modes of medical treatment, all more or less dependent upon the principle of the influence of the mind over the body, and many of its so-called healers are far from being educated in medical science. Their general education also is much

below the average. Now it is the bounden duty of the physician to look into this sphere and bring this science of mental healing where it should be, into use by the practitioner of medicine. If the human body is simply a machine, if it is subject to mechanical disturbances alone, then the sciences of chemistry and biology will sooner or later take us to the citadel of things and tell us what disease is. Doctors have told us about ptomaines and bacteria, but they have not told us much about ourselves. When I say that I do not mean the muscles, or bones, or tissues of the body, but I mean this something that you know when we say "I" or you think of when you say "You." Now, what is it that makes a man get sick? There is a certain control over these things which we do not seem to get at. You know that sometimes you will get cold and sometimes you will not. Some people will lie right down and let themselves get eaten up by microbes. There is a young man in the institution with which I am connected who is exceedingly susceptible to contagious diseases, and it has become a joke among his comrades. At one time he was expected to be at an athletic meet, but he did not appear, and one of his companions tersely described the situation when he said in answer to inquiries, "Oh, So and So has been bitten by another microbe." Now why is it that some young men who get near contagious disease contract it while some never do?

If the human body is not a mere machine, if disease can be controlled by forces not hitherto classed as material, then it seems to me that there opens to the physician a far greater realm than he has yet reached. I refer, of course, to that class of investigations which are called Christian Science, mental healing, faith cure, etc. I am not an apostle of any one of these schools, but I think there certainly can be no person of any experience whatever who can fail to see that there is a certain control of the mind over the body in this matter of disease. The mind does, to a certain extent, control the body in health, and I say it is the duty of educated physicians to take hold of this subject and study it as they have never studied it before. There is nothing supernatural about it, nothing miraculous about it. It is not right for the physician to leave this to the profitless speculations of mental philosophy. There is something there which you have not yet appreciated—something, the value of which to medical science you have not discovered. I commend this to you for further study. I cannot believe that I am a crank. I have never had any one of the disciples of any one of these schools come near when those dear to me were sick. When anybody is sick in our family, I send for a physician, but I cannot help seeing that these physicians do use mental healing to some extent, giving things that are not exactly coincident with the label on the bottle. I know of a case of a lady who could not take quinine. I was ordered by the doctor to give it to her, but she insisted that it made her ears ring for three hours after taking it. Now I thought I would try something, so I made up three doses of granulated sugar in the same way as the quinine was prepared, and it produced the very same result in the ears. That was not mind cure, but mind poisoning. Now doctors (if any are left here), please think of this great subject that is surely going to be studied, that is going to be made clear, whose lines are to

be defined. The laws which govern the relation between mind and matter—this is a worthy subject of investigation. I commend it to you.

And last of all, I call upon the doctors for one thing more, and that is, that they shall get together. I hear of the various schools, and know of the names of two or three of them. I believe that as individuals medical men have great respect for each other, but I think it is a great shame that physicians of different schools are more bigoted with each other than are clergymen about their sects. In the practical work they are getting together, and often they will come together in a friendly way when there is a great crisis in the life of a patient, but they are far from being what they might be to each other. I am sure there must be some basis in medical science that we can agree upon. There is not the same amount to agree upon that there is in chemistry or physics or biology, but it does seem to me that homœopaths and allopaths should come together, that they should come together at their meetings and at the bedside. As it is, they are scattering their forces. They could accomplish so much more if they would meet on the common basis—an earnest desire to learn the truth. Often a doctor will call another physician in consultation, and he will look around for somebody he is absolutely sure will agree with himself. Now that is not the right kind of a consultation. I do not like scientific sectarianism that has a barb wire fence about it. Agreement must come, where now there is complaint that doctors do not trust each other. There must be an end to this. The two schools, forty schools, if there are such, must come together on some common ground, and, starting from that point, meet each other as men and brothers in a common cause.

I would like to sum up these points. First, that doctors shall see to it that the boards of health shall be made up of the very best doctors in the community, and that the very highest medical knowledge shall be at the service of the public health department.

Second, that they shall see to it that our boys and girls grow up strong, hardy, sturdy and vigorous. That they shall stop talking to us of the constitution, of the condition of the system, of the power of vitality, and tell us about ourselves, if they know us as we are.

Third, that they shall start at once and go far into the subject of the influence of the mind over disease. That they shall stop the jabbering and the cries of quacks and charlatans by earnest endeavor to learn the truth for themselves. That they shall recognize the truth and earnestness and devotion of men in our schools. When they do this, they will begin to get at the root of the matter. It seems to me that they will begin finally to get at the man, to cure the actual man himself. When they know what is wrong, they will go behind the body, behind the brain, behind heredity, and find that mysterious something—the man himself. And the physician can say, "I helped in this great solution of the mystery of all the ages." And the clergyman can say, "I helped to bring the physical man face to face with the soul of man, made in the image of God." And possibly I, because I have been a teacher all my life, can say—it may be that some teacher of science may say he also helped in solving the great problem of disease, which be-

longs to the doctor, to the clergyman and to the teacher more perhaps than to any others in this great human world.

THE CLOSE OF THE MEETING

The Chairman, Edward Beecher Hooker, said:

I am sure I but voice the feelings of all visiting members of the Institute and their families and friends when, on this last evening of the session, I say to our hosts, to the ladies and to the gentlemen alike, that you have entertained us most delightfully and that we appreciate your generous hospitality. The perfection of your plans in advance is only equaled by your resourcefulness in changing them to give us greater pleasure when the occasion arose. The warmth of your welcome and the likeness of our appreciation have created such a rise in temperature that no east wind could withstand it, and on this closing day the sun has shone upon us, and if, as night draws on, the clouds should form again, it would be but typical of the gloom we feel as the parting hour draws near.

TIMOTHY F. ALLEN

REPORT

OF THE

NECROLOGIST

C. A. WEIRICK, M. D.

In Memoriam

1903

SENIORS

TIMOTHY FIELD ALLEN
AARON BALDWIN
ASA WHITFORD BROWN
MARTIN DESCHERE
THOMAS C. DUNCAN
AUGUSTUS NEGENDANK
RUFUS SHACKFORD
EDWARD P. SCALES
CHESTER W. SCOTT
BUSHROD W. JAMES
LESTER M. PRATT
TULLIO S. VERDI
NANCY T. WILLIAMS
ALFRED W. WOODWARD

HONORARY MEMBER

THEODORE KAFKA

JUNIORS

THOMAS DOCKING
RUSSELL FAY
FRANKLIN A. GARDNER
NORMAN GETMAN
WILLIAM M. GRIFFITH
CHARLES E. HOUSE
LEONARD KITTINGER
DAVID McCLELLAN
JOHN MILLER
FREDERICK A. REMINGTON
ROBERT N. TOOKER
BARTUS TREW

NOTICES OF DECEASED MEMBERS

NANCY T. WILLIAMS, M. D.*

Dr. Nancy T. Williams, of Augusta, Maine, became a member of the Institute in 1876, at the meeting at Philadelphia, where the Institute met in conjunction with the World's Homœopathic Convention.

From the time that she united with our National organization, Dr. Williams' devotion to the cause of homœopathy became a part of her life. The members of the Institute need not be told of the loyalty and self-sacrifice of this noble woman in promoting the cause of homœopathy, more especially in connection with the erection of the Monument at Washington. Of this the "Historic Sketch of the Monument," published by the Monument Committee, says:

"Without invidious distinction, too much praise cannot be given to Dr. Nancy T. Williams, of Augusta, Maine, who, at the 1897 meeting of the Institute, *begged the privilege* of adding one thousand dollars to her previous subscription, modestly revealing the fact that the contribution was from her own earnings in putting into practice the teachings of Hahnemann, and was her way of practically showing her gratitude. The full amount of the contributions of this noble woman was more than four thousand dollars, constituting her the largest individual contributor. Any enterprise numbering among its promoters such examples of heroic devotion, could not possibly fail of success."

TIMOTHY FIELD ALLEN, M. D.

The great hospitals and other medical institutions, public and private, of New York City are, as generally conceded, in their constructions, appointments and improved methods of treatment, unequaled by those of any other city in the world. Public spirit and individual generosity, so conspicuous in all the elements of metropolitan life, have alike contributed to this end. But even these, pronounced and influential as they are, could never have accomplished this magnificent result were it not for the unselfish and devoted aid and co-operation of the entire medical fraternity, irrespective of any particular "school" or "system." The physicians of New York have, through their unselfish and invaluable efforts on behalf of these institutions, made them what they are today, the crowning achievement in the nineteenth century in its distinguishing work for the good of humanity. The public career of all our eminent physicians—as apart from their private practice—is an illustration of this fact, but in no instance more conspicuous than in that of Professor Timothy Field Allen, whose personal identification with the direction and success of the New York Homœopathic College, the New York Ophthalmic Hospital and of the Laura Franklin Free Hospital for children, have won for him the appreciation and honor that his earnest efforts in the interests of these prominent institutions deserve. The life work and success of Professor Allen are an incentive to American youth.

Timothy Field Allen comes from a family long prominent in his native state, his father, Dr. David Allen, being a leading physician in Vermont, and his mother, Eliza Graves Allen, being a member of an old New England family. He was born at Westminster, in the Green Mountain State, on the 24th of April, 1837. He became a student at Amherst College, from which institution he graduated in 1858, receiving from his alma mater in 1861 his degree of A. M. He then entered the medical department of the University of New York, where, after a thorough course, he received his diploma in 1861. It was at an early part of the Civil War that Dr. Allen entered the United States Army as acting Assistant Surgeon, and saw service under the command of Surgeon Wagner, U. S. A., at Point Lookout. Upon his return to New York he commenced

*Notwithstanding the most diligent effort to do so, it has been found to be impossible to obtain the usual sketch of the life of Dr. Williams. This fact only goes to show that this good woman was as modest and retiring as she was loyal and devoted.—Ch. G.

practice, forming a partnership with the late Dr. Carroll Dunham, with offices at 68 East 12th Street. His success was immediate and permanent, and yet, despite the constant demands upon his professional services, he found opportunity to fill the chair of chemistry in the New York Medical College for Women. Subsequently he became Professor of Anatomy and later Professor of Materia Medica and Therapeutics and Director of the Laboratory of Experimental Pharmacology in the New York Homœopathic Medical College and Hospital. He has also been Dean of the Faculty and is now President of this great institution, towards the magnificent success and results of which his personal energies and devotion have so strikingly and effectually contributed. Through his advice and influence, it is understood, was due the generosity of the late Roswell P. Flower, the contributor of over a half million dollars to the building fund, the founding in connection with the college of the model hospital and surgic amphitheater which bears the honored name of New York's former Governor.

It is in his connection with the New York Ophthalmic Hospital, however, that Professor Allen has earned the appreciation and gratitude of the community in which he has lived and labored for so many years. While Professor of Anatomy there his advice and services were requested by the trustees in their decision to place the institution under Homœopathic influences. The undertaking required a man of reputation and more than ordinary professional acquirements to accomplish this, and the trustees in selecting Professor Allen had in view his standing as a surgeon and oculist. He promptly replied to their request for his assistance, and with the co-operation of the late Professor Liebold introduced Homœopathic treatment into the hospital and inaugurated a policy and system of management that soon placed it at the head of all similar institutions. Not only were his professional ability and experience thus given the hospital, but his own individual influence and efforts were employed towards raising the funds necessary for the completion of the new building for the use of the hospital, and this complete and model structure is a lasting monument to his success. As consulting surgeon and a member of the Board of Directors Professor Allen continues to take an absorbing interest in its affairs. Nor was his work in connection with the Laura Franklin Free Hospital for Children less important in its conception and results. The projector of the hospital, Mr. Delano, after its erection and thorough equipment, called upon Professor Allen to appoint the staff of Homœopathic physicians and surgeons, and his selection fully justified the expectations of Mr. Delano and other friends of the hospital, for the results of the treatment instituted by this select staff have been unprecedented in the annals of American medical history, the mortality from year to year, as the statistics show, being less than one-third below that of any similar institution in the world under different course of treatment. Professor Allen has always been prominent in practical movements looking towards the advancement and popularizing of the natural sciences. He has for forty years made a study of botany on special lines, and his presentation to the New York Botanical Garden and Museum of his special collection of some five thousand specimens of dry plant known as Characeæ, or "Brittle Worts," is only another instance of his public spirit and generosity. This collection is the finest collection of the kind in the United States, if not in the world. These plants live in fresh water ponds and streams in all zones, but there are also a few specimens that grow in the sea—small in size but very interesting on account of their isolated position in the vegetable kingdom—and are not closely related to any other family. This rare collection has been arranged in a fireproof building at the Botanical Garden, and has proved a great and instructive attraction to students and visitors. Its value cannot be overestimated from either a scientific or pecuniary point of view, as the specimens have been obtained through Professor Allen's special collectors in all parts of the world at great expense. Professor Allen is a member of the Board of Managers of the New York Botanical Garden and a charter member, and for many years president of the Torry Botanical Club of New York City, named in honor of his personal friend and associate, the late Professor John Torry, of Columbia College. He is also a fellow of the American Association for the Advancement of Science and of the New York Academy of Science. To the medical profession of the entire world Professor Allen is known through his great work in the exhaustive volumes, the Encyclopedia of Pure Materia Medica, which has become standard

CHARLES E. HOUSE
EDWARD P. SCALES
FREDERICK REMINGTON

NANCY T. WILLIAMS
BUSHROD W. JAMES

T. C. DUNCAN
THOMAS DOCKING
AUGUST NEGENDANK

authority upon drugs and their uses. An elaborate index of twelve hundred pages supplements the Encyclopedia, and this was followed by the publication of other works, which have also become recognized as invaluable text books upon the subjects of which they treat, and include "A Handbook of Materia Medica." Professor Allen also revised and produced a fine edition of "Beonninghausen's Therapeutic Pocket Book." He has for years also been a frequent and valued contributor to medical periodicals in America and Europe. The degree of LL. D. was conferred upon him by Amherst College in 1853. Though always a resident and citizen of New York, Professor Allen has a handsome country seat at Litchfield, Conn.

The Homœopathic practice of medicine has no more able and learned exponent than Timothy Field Allen. By teaching and example he has impressed his own practical views and methods upon his generation, and his authority is as highly respected as his skill as physician and surgeon is univerally acknowledged. Few men have done more good in their day and age.

BUSHROD WASHINGTON JAMES, M. D., LL. D.

Bushrod W. James died at his residence in Philadelphia, January 6, 1903. He was born August 25, 1836, at Somerton, Pa., a village within the present boundaries of the city of Philadelphia. He was descended from a Welsh ancestry who emigrated with Penn and his associates in 1680, or soon afterwards, and settled a few miles west of Philadelphia. They named their new home "Radnor." from the name of their old Welsh home, Radnorshire. Our subject was a member of the fifth generation from the emigrant David James, in whose Radnor home four generations of his descendants had their birth. Dr. Bushrod James's father, David James, M.D., was a graduate of Jefferson Medical College, of the class of 1828, having been among the first students who entered the (then new) institution in 1826. He practiced the "old school" system until about 1844, at which time he began an investigation of homœopathy and rapidly adopted it in his practice. He was the pioneer of the new system over many miles of territory in Philadelphia, Bucks and Montgomery Counties and was a staunch and devoted exponent of its principles until his death.

Bushrod W. James's early education was obtained in the public schools of his native city supplemented by a complete course in the Philadelphia High School. From the latter institution he received the degree of Master of Arts and then entered the Homœopathic Medical College of Pennsylvania, from which he graduated in medicine February 27, 1857. The whole of his subsequent career was spent in medical practice in Philadelphia.

When our subject entered upon the practice of his profession, the art of surgery among homœopathic physicians was at a very low level. They were so earnestly engaged in developing the new art of prescribing medicines for the cure of disease that they seem to have had neither time nor inclination for the more mechanical part of their calling. The homœopathic profession, however, was beginning to feel the need of surgeons, especially as it was quite well known that if a homœopathic practitioner should be prosecuted for mal-practice in a surgical case, he could expect no measure of support from the experts of the opposing school, and would be left to the tender mercies of an uninformed jury, no matter how unjust the prosecution might be. Notwithstanding this professional peril, Dr. James, in common with some few other homœopathists, engaged in surgical work as opportunity offered, and aided in establishing professional confidence in homœopathic surgeons. Subsequently, however, he practically abandoned this line of professional work and devoted his attention more especially to the treatment of diseases and abnormalities of the eye and ear. In this department he built up for himself a large practice which he held until his death. He also became greatly interested, in his earlier years, in the subject of public hygiene, particularly in the department of Climatology, and contributed numerous and valuable Papers to the literature of the subject, besides a more standard and formal work entitled "American Health Resorts, with Notes Upon Their Climate." This work was originally published in 1889.

No portrayal of Dr. James' medical personality and career can be adequate and just except as it includes mention of his profound belief in the homœopathic principle of remedial selection and his firm and persistent adherence to it in the

practice of his profession. In the practice of his ophthalmic specialty, he seldom met with cases in which he did not consider the homœopathic remedy called for in the progress of the treatment. He never boasted of the "purity" of his practice, yet he seems never to have forgotten that he was a homœopathic physician.

His active interest in the organizations and institutions of homœopathy were remarkable. In the county, state and national societies he was a faithful, earnest and tireless worker. In all of them he was often relied upon to do the drudgery of committee work, and was often on record as the contributor of scientific papers to its bureaus and sections. In 1882 he held the office of Vice-President of the Institute and in the following year he served in the Presidency—the highest office in the gift of the American homœopathic profession. He was one of the number who organized the county society of Philadelphia in 1866, and the state society of Pennsylvania in the same year. In 1872 he joined in the organization of the Hahnemann Medical Club of Philadelphia, a society whose work and influence were fruitful of good results in the advancement of scientific homœopathy and in the maintenance of personal and professional amenities among the physicians of Philadelphia. Dr. James also assisted, in 1876, in organizing the Children's Homœopathic Hospital of Philadelphia, and for a quarter of a century remained one of its most self-sacrificing supporters.

For a number of years he was the surgical editor of the *American Observer*, a homœopathic journal published in Detroit, Mich. From 1880 to 1888 he was the Managing Business Editor of the *Hahnemannian Monthly*, and throughout his entire professional life was a frequent contributor to our journalistic literature generally.

Besides the work on American Health Resorts already mentioned, Dr. James was the author of "Alaska, its Neglected Past and its Brilliant Future," "Alaskana," "Echoes of the Battle," "The Political Freshman," "Rise and Progress of Masonic Veteran Associations" and other volumes. He also recently completed "A History of the American Institute of Homœopathy."

Dr. James was never married. He is survived by a brother, Dr. John E. James, and by several nephews engaged in medical practice in Philadelphia.

ROBERT N. TOOKER, M. D.

"What! Tooker dead? It cannot be. I saw him only two or three days ago, and he seemed unusually well, bright and cheerful." Conversation like this was repeated over and over in all parts of the great city between physicians of all schools, and with laymen.

There was not one discordant note, all alike, those who had only read that which came from his pen, those who had listened to his teaching, those who knew him only socially, and those to whom he had ministered joined with his family in the sense of the great loss. Every one realized that the place he left vacant would not and could not be filled at all easily.

In early life he commenced to develop that which gave him renown later, as one of the greatest artists in word painting. He had the happy faculty either in writing or speaking of making his audiences to see as clearly as though presented in material form; not only this, but always in beautiful harmonious coloring. He could not write an uninteresting book or article. He was a frequent contributor to current medical literature.

His greatest works, "Diseases of Children" for the profession, the leading text book in his school of medicine on this subject, and "All About the Baby," a popular work for mothers, fully illustrate this.

As a teacher the universal remark by student and practitioners who have had the opportunity of listening to him is: "Prof. Tooker seems to know just what it is that we need, and tells it in such a way that we cannot misunderstand nor forget. His lectures stay with one forever. There is never any chaff in them; they are all wheat."

As a man upright, honest and very congenial. He had a large sense of justice, and while firm as a rock in what he deemed right, yet had a sensitive nature that made him always kind and considerate. He was always as ready to correct an error in himself as in others.

As husband and father no one could be more kind and considerate or watch more closely the very best interests of wife and children.

Dr. Tooker was born in Rochester, N. Y., March 28, 1841, and was graduated from Genesee College at Lima, in the same State. He then came to Chicago and studied medicine at Rush Medical College. In 1865 he entered Bellevue Hospital Medical College in New York and then became an army surgeon. During the yellow fever excitement in New Orleans he was stationed there. In 1873 Dr. Tooker returned to Chicago and made it his home. Five years prior to that he married Miss Clara Johnson, who survives him with three children, all of whom live on the North Side—Dr. Robert N. Tooker, Mrs. Benjamin B. Felix and Miss Marion Tooker.

Dr. Tooker was a valued and active member of his own State Society and of the Homœopathic Medical Society of Chicago. He became a member of the American Institute of Homœopathy in 1879 and has been always one of its ablest and best members.

His death occurred at his residence in Chicago, November 8, 1902.

ALFRED WHEELOCK WOODWARD, M. D.

That death loves a shining mark was never more strikingly exemplified than in the recent passing of Dr. A. W. Woodward, of Chicago, who was one of the foremost physicians in the West. Dr. Woodward's death was a shock to his many old friends in and out of Chicago, not a few of whom had known him intimately for half a century. While he was not far advanced in years, being but sixty-three years of age, still he was an old settler in Illinois and Chicago, having lived in the State for fifty-five years and in Chicago for over forty years.

Dr. Woodward was born in Barnstable, Mass., in 1839. When a boy of eight years, in 1847, he moved with his parents to Galena, Ill., but soon after went to Platteville, Wis., to be educated. There, under the tuition of Professor J. L. Pickard, he received his preliminary education, remaining in Platteville until 1857.

In 1860 Dr. Woodward came to Chicago and engaged in business. In 1862 he enlisted in the Waterhouse Battery, and was soon promoted to first lieutenant. He participated in the battles of Pittsburg Landing, Memphis and Vicksburg, and made an enviable record as a soldier.

Returning to Chicago in 1863, he entered the Hahnemann Medical College, from which he graduated in 1865. Later he became one of the founders of the Chicago Homœopathic College, its vice-president and professor of Materia Medica. His work there was always his greatest delight. He has made various contributions to medical literature, his supreme effort being embodied in a volume on "Constitutional Therapeutics." This work was but lately finished.

It is not through medical literature and in college work alone, however, that Dr. Woodward will be remembered, for, added, to his fine intellect, his retentive memory, his fondness of details and an indefatigable energy, he had that rare sympathy, calm delicacy and refinement which made him most welcome in the sick-room: and in homes of many today his loss is felt as that of an intimate personal friend.

Dr. Woodward was in every sense of the word a great man, and no words could better express his ideal of life than those he himself once uttered in behalf of a friend: "He realized that there are two standards of success, one which is measured by accumulated riches, and another in which a man leaves the world his debtor—for the debt it owes cannot be paid in gold. In the former the debt is liquidated. In the latter it is at interest payable only in gratitude. The first standard is attainable by one of sufficient capacity and fixedness of purpose. The second, as a rule, is only won by him who is indifferent to the first. The second comes with God's help, from high ideals and a spiritual nature. He who seeks the first lives in the present. He who seeks the second lives in the future. The one is at home here. The other has not yet arrived at home."

Dr. Woodward was descended from a family of college educators and jurists. His heritage was a rich one, but he has enhanced it.

The cause of his death was Bright's disease. He passed away in a peaceful sleep at his home, 130 Ashland Boulevard, Chicago, Nov. 9, 1902.

TULLIO SUZZARA VERDI, WASHINGTON, D. C.

Dr. Verdi was born in Mantua, in 1829. He received his preliminary education in the Mantua Gymnasium of Science and Literature. Being born at a time when the possession of his native country was in dispute, and not only the citizens but the country itself divided in its allegiance; the one true to instinct, desiring Italy's supremacy, the other thinking more of ease, comfort and luxury, willing to pass into the hands of Austria. Young Verdi naturally entered the Sardinian army and cast his lot with King Albert. We can readily imagine with what vigor and with what spirit he fought at Novara when only twenty years of age. We can imagine the bitterness which defeat engendered, the disappointment which met his effort to find a home under Louis Napoleon, the disquiet that must have been present with him in England, and the revival of all generous impulses when he landed in America, to which country he was drawn by the writings of his countryman, Botta. When he arrived in New York he was the possessor of five dollars; but what was that to him? He had found a country where the air was free and, therefore, though possessing only five dollars, he found in it the possibility for the development of any qualities he might possess. More than this, upon arriving here he met Garibaldi, who was a representative of all that was best in Italian manhood.

But necessity required that Dr. Verdi should find the means of livelihood. This he gained by teaching in Brown University. While there he met Dr. Okie, and by him his attention was drawn to homœopathy. There was no great inducement for an exiled man to take up the profession of medicine as his life work if his associates were to be among those who were at that time more or less ostracised, for each one was on trial in the community in which he might settle, and he could expect little help from his confreres. Yet nothing was more natural than that Dr. Verdi, a representative of the Latin race, possessor of bravery, as shown during his youth, rather anxious by reason of temperament for a struggle, should throw his fortunes with the School of Homœopathy, which was then comparatively small. To carry out his ambitions he united himself with the Hahnemannian College at Philadelphia, where he graduated with the class of '56. The college during his student life was especially active, and he came in contact with Helmuth, who was in the dispensary and afterward filled the Chair of Anatomy, with Dowling, who graduated a year later than himself, with Dr. George Beakley, George Bebe, Couch, C. H. Drake, O. B. Gause and B. F. Joslin, and from the stories and reminiscences that I have heard at various banquets they were a jolly set of students, but to all of them the result of their work was of sufficient importance to insure earnestness in their efforts to grasp the teachings of the school, and they all had the characteristics necessary for pioneers in the party which was to bring about the reform in medicine.

Dr. Verdi moved to Washington City in 1857. In 1860 he married Miss Denny of Pittsburg. Through this marriage his social position was such that he was immediately thrown with the official circle, so he was able to take an active part in the affairs at Washington during the ciivl war, treating many of the men whose names appear prominently in the history of the country during that period. He was Mr. Seward's physician at the time of his attempted assassination, and frequently when we met at his hospitable table he recounted his experiences during that period.

In 1871 he was appointed a member of the first and only Board of Health of the District of Columbia. While on this Board he served as Secretary and Chairman of the Sanitary Committee. Fully imbued with the importance of the health of the Capital of the Nation, he frequently assumed authority for the Board, and spent money to meet emergencies the possibilities of which were not recognized in making appropriation for the city. Every one of these powers assumed by him have now been granted to his successors by legislative action, and all expenditures of the Board without exception were provided for in the various deficiency bills. He secured the dismissal of Dr. Van Aernam from the office of Pension Surgeons because he refused to recognize homœopathic physicians, and secured their admittance upon the staff of Pension Examiners.

In 1873 he visited Europe bearing the commission of Sanitary Commissioner, and the result of his trip instituted many reforms in the sanitary system of the Capital. He was especially active in the movement to organize the Homœopathic Hospital. He was one of the charter members of the Homœopathic Medi-

cas Society of the District of Columbia, one of its early presidents, and for many years its most active member. He joined the American Institute of Homœopathy in 1858, and served on nearly all of its bureaus and committees.

Ill health was the disability which robbed him of his means of livelihood among us. With the hope of restoration he returned to his native land, where he practiced in Milan and then in Paris, and on his return to Milan his health again failed and he died November 26, 1902.

Dr. Verdi as a youth showed courage, energy and the most warlike spirit. In the vigor of manhood these qualities matured, and all were devoted to the cause of homœopathy in the District of Columbia.

FRANKLIN H. GARDNER, M. D.

Dr. Franklin H. Gardner died of typhoid fever at his home in Washington, D. C., February 13, 1903. He was born in Salem, Massachusetts, forty-six years ago. Graduating from the New York Homœopathic Medical College in 1882, he established himself in Munson, Mass., but within a year removed to Washington as the assistant of Dr. Wm. H. Cate, whose business he shortly acquired by purchase. Dr. Gardner rapidly built up the largest and most remunerative practice at the National Capital. He was the White House physician throughout the Harrison administration and his reputation and skill brought under his care many of the best known men in public life of the last decade. The recognition of his ability by his confreres was evidenced in the constant demands made upon him as a consultant. He was a firm believer in the efficacy of the homœopathic law. His studious habits kept him abreast of advancing medical thought and he quickly grasped and applied new therapeutic measures of value. His character was most lovable: A gentleman in every nice detail, scrupulous in all his relations, generous to a fault, he gave constant testimony to the rectitude of his Quaker upbringing.

He was actively identified with the National Homœopathic Hospital for twenty years, and a Gardner memorial building is about to be erected as a wing to this institution. He was an ex-president of the Homœopathic Medical Society of the District of Columbia, and in 1896 was president of the National Society of Electro-Therapeutists.

He is survived by his widow, Annie B. Webb, of Salem, Mass., whom he married in 1883, and by three children—Helen, Harry and Elise. E. A. O'B.

MARTIN DESCHERE, M. D.

The death of Martin Deschere in New York, on July 21, 1902, although not entirely unexpected, was still a heavy blow to his numerous friends. It did not seem possible that his cheery and energetic personality could be so prematurely blotted out. Born in Hamburg, Germany, on June 8, 1848, he came to America as a lad, decided to become a physician, and graduated from the New York Homœopathic Medical College and Hospital in 1875. His reputation as an able and earnest student of medicine was early established, and he was soon appointed Professor of Pedology in his alma mater, a position he filled with great credit until the present year, when ill health forced him to resign. His devotion to the study of materia medica was unbounded and his reputation as a learned and well trained investigator of that branch of medical science was widely extended.

Dr. Deschere was a singularly unselfish man. He had little thought for his own advancement or aggrandizement, but labored with an unfailing and enthusiastic faith for the advancement of Homœopathy. While he was possessed of very positive convictions, he ws tolerant in his opinions, charitable in his judgments, and possessed the rare faculty of convincing those who differed from him. He never attacked persons, but often vigorously assailed principles. As a teacher his instructions were remarkable for their lucidity and his illustrations were forcible and impressive.

Dr. Deschere was consulting physician to the Laura Franklin Free Hospital for Children; visiting physician to the New York Homœopathic Medical College and Hospital, where he inaugurated a very successful system of bedside clinical instruction in connection with the outdoor department; ex-president of the New York County Society, and the Materia Medica Society, which he founded; member of the National, State and County Medical Societies, and of the American

Institute, which he joined in 1875, becoming a senior at the meeting at Richfield Springs in 1900. He was an alumnus of the New York Homœopathic Medical College and an emeritus professor of that institution at the time of his death, besides being a member of several medical clubs. He was also an associate editor of the North American Journal of Homœopathy, and his contributions to current medical literature were numerous. He had been engaged for some years in the preparation of a work on children's diseases, which his ill health prevented him from finishing entirely, though some parts are complete.

Because of great success in his special branch of medicine he was known throughout the land and his name will always rank among the leaders of Homœopathy. The cause of Homœopathy is richer for his having lived, yet poor, indeed, to be forced to spare him. Loyal to his profession, his friends and his family, his memory will be long cherished by those who knew and loved him.

THOMAS DOCKING, M. D.

Dr. Docking, M. D., was born near London, England, July 12, 1826, and died at San Diego, Cal., September 20, 1902. He was married at the age of seventeen. He graduated from two medical colleges in England, and for twelve years was engaged in hospital work and general practice in London. He then entered the medical service of the Queen of England and was assigned to the Merchant Marine Department. In America he practiced medicine in San Francisco and Oakland, Cal. He was a man of great force of character, who had the courage to live up to his convictions. He took an active interest in the moral development of mankind. The following are some of the important events in his medical career:

FREDERICK ADELBERT REMINGTON, M. D.

Dr. Frederick A. Remington, one of the leading and most successful physicians and surgeons of Sioux City, was born near Omro, Wis., August 12, 1852. His father, William H. Remington, was a native of New York, and his mother, Hester A. Remington, was born in Maine. At the age of twenty-five he entered the State University of Iowa, graduating from the medical department in 1881. He then located in Woonsocket, So. Dak., where he practiced his profession, at the same time teaching school at this place.

In 1877 he was married to Nettie E. Reese of Pleasant Grove, Minn. They had three children, one of whom is now living, Earl Clair, born September 19, 1885.

In 1890 he located in Sioux City, where in a short time his valuable services, kind and charitable disposition and self-sacrificing devotion to his profession, for which he so willingly gave his life, acquired for him an unusually large practice and circle of friends. For the past eight years he gave special attention to the surgical branch of his profession and was more than successful in this also.

Besides being a member of the American Institute of Homœopathy and the Missouri Valley Homœopathic Medical Association, he was a leading member of the Sioux City Homœopathic Medical Society and the State organization, and was President of the Iowa Oil and Investment Company.

The doctor was a member of six orders, viz., Masons, Knights Templar, Knights of Pythias, Mystic Shriners, Modern Woodmen and Woodmen of the World, and was always identified with the Republican party and was a member of the First Baptist Church of Sioux City, and Woonsocket, So. Dak.

On June 1, 1903, after a three days' illness, he died of acute myelitis. The funeral services were in charge of the local Commandery of Knights Templar, and Blue Lodge, A. F. and A. M., furnished the pall-bearers and served as escort of honor to and from the church.

CHESTER W. SCOTT, M. D.

Dr. Scott was born in Barre, Vermont, November 10, 1832. He died June 10, 1903. He spent his boyhood on a farm, and received his education at an academy and at Pittsfield, Vt. Prior to the study of medicine he taught school. His preparatory medical studies were pursued under the direction of Drs. Darling and Houghton at Lyndon, Vt. He graduated in 1854 from Hahnemann Medical College of Philadelphia. He served in that institution as demonstrator of anatomy.

BARTUS TREW
RUFUS SHACKFORD
JOHN MILLER

ROBERT N. TOOKER
ALFRED W. WOODWARD

MARTIN DESCHERE
THEODOR KAFKA
ASA WHITFORD BROWN

[illegible]

[illegible] P. FAY, M. D.

[illegible]

[illegible] MARCUS PRATT, M. D.

[illegible]

HAYES CLIFTON FRENCH, M. D.

SAN FRANCISCO

Dr. French became a member of the Institute in 1[illegible].

Dr. French was born in Lawrence, Kansas, May 1[illegible], 1[illegible]. He is the only grandson of Amanda [illegible], and with his little family of two sons and a daughter, settled in Lake County, Ohio.

Dr. French began the study of medicine with Dr. James Strong of Painesville, Ohio, who was then one of the many very prominent physicians of Northern Ohio. He was then law student at Western Reserve College of Cleveland, Ohio. In the year of 1[illegible] he entered Ann Arbor University, and finished his long course in medical lectures that winter.

In the spring of 1[illegible] he formed a partnership with Dr. Smith, of Niles, Mich., with whom he remained until the first call came for volunteers to defend the Union, when he enlisted in the [illegible] Michigan Volunteer Infantry, serving through many of the principal battles of the rebellion. During the long marches through the swamps of the Mississippi he contracted rheumatism, from which he was sent to the Army Hospital at Baltimore, Md., where he was very ill for three

He practiced medicine in Irasburg and Lyndon, Vt. In 1870 he located in Lawrence, Mass., where he obtained a large practice, which he relinquished three years before his death because of ill health. His wife and several children survive him. He was a member of the Massachusetts Homœopathic Medical Society, a senior in the American Institute of Homœopathy and a Master Mason.

RUSSELL P. FAY, M. D.

Dr. Fay was born at Burlington, N. Y., March 2, 1864, and died at Yonkers, N. Y., March 31, 1903, age thirty-nine years. He obtained his literary education at Cooperstown, N. Y., graduated from the New York Homœopathic Medical College, and completed an eighteen months' course at the Ward's Island Hospital. He was an active member of the following medical societies and boards: Westchester County Homœopathic Medical Society, New York State Homœopathic Medical Society, American Institute of Homœopathy, Academy Pathological Sciences, National Society of Electro-Therapeutics, Chiron Club, Meissen Club, Yonkers Clinical Club, and Growing Medical Board of Yonkers Homœopathic Hospital and Maternity. Dr. Fay located at Yonkers, N. Y., in 1888, and was married in 1895 to Miss Ruby L. Johnson. His wife and only child, Roberta Fay, survive him.

LESTER MARCUS PRATT, M. D.

Dr. Pratt was born in Pratt's Hollow, N. Y., 1818, and died July 6, 1901, aged eighty-three years. He was educated in medicine at the Western Reserve Medical College, Cleveland, Ohio, and graduated from the Pennsylvania Homœopathic Medical College, Philadelphia, Pa., 1854. He practiced medicine in Albany, N. Y., from 1854 to 1893. From the latter date until his demise he resided with his daughter at Homer, N. Y. For two years he was resident physician to the Albany Homœopathic Hospital. He was one of the founders of that institution. Dr. Pratt was one of the founders of the Albany County Homœopathic Medical Society, and served four terms as its president. He joined the State Homœopathic Society in 1864, and filled many responsible positions in the society. He joined the American Institute of Homœopathy in 1859 and became a senior in 1884.

He was honorary member of the Hahnemann Institute of Medicine, Philadelphia, and the Regents of the State University conferred on him an honorary degree. He was an interesting and instructive contributor to medical literature. Some of his papers are the following: "Case of Inversion of the Uterus," "Cases of Cerebro-Spinal Meningitis," "Case of Dystocia," and "The Status and Progress of Homœopathy in New York State."

He was a strong character and was one of the pioneers of homœopathy in New York, being an important factor in giving his school of medicine such a large following in the Empire State.

Dr. Pratt married Adeline Castle in 1840. She died in 1850. Two daughters survive the doctor.

HAYES CLIFTON FRENCH, M. D.

SAN FRANCISCO

Dr. French became a member of the Institute in 1875.

Dr. French was born in Leicester, England, May 21, 1840. His father emigrated to America in 1847, and with his little family of two sons and a daughter, settled in Lorain County, Ohio.

Dr. French began the study of medicine with Dr. Jamin Strong, of Elyria, Ohio, who was then and for many years remained Professor of "Materia Medica" in the then new "Charity Hospital College" of Cleveland, Ohio. In the winter of 1859 he entered Ann Arbor University, and finished his first course of Medical lectures that winter.

In the spring of 1861 he formed a partnership with Dr. Swift, of Northville, Mich., with whom he remained till the first call came for volunteers to defend the Union, when he enlisted in the "17th Michigan Volunteer Infantry," serving through many of the principal battles of the rebellion. During the long marches through the swamps of the South-land he contracted rheumatic fever and was sent to the Army Hospital at Baltimore, Md., where he was very ill for three

months, and upon recovery served as "Assistant Surgeon" and "Hospital Steward," and was honorably discharged for disability.

In 1864 he returned again to Ann Arbor, and completed his course, and in April, 1865, graduated from the Medical Department of the "University of Michigan." After several years spent in the practice of medicine according to the tenets of the "Regular" school, and taking several lecture tours, he settled in Chicago, and in 1870 he helped to organize and establish the "Bennett Eclectic Medical College" of Chicago, Ill. Here he remained for two years, filling the chair of Professor of "Physiology and Hygiene," until excessive labor produced loss of voice and he was compelled, reluctantly, to resign his chair in the college.

For several years Dr. French served on the Board of "State Medical Examiners," also as Editor of the "Eye and Ear Department" of the "California Homœopath," has also written many articles for the Homœopathic journals throughout the country; also for the "North American Review," the "Review of Reviews," and had in preparation at the time he was stricken with paralysis, three years ago, several text books on his specialty, which, from his twenty-one years' practice, must have been of value to the profession.

To those who knew Dr. French intimately, no word need be said of his generous, large-hearted kindness of disposition, or the uprightness of his character, and while it was impossible for one of his positive, dominant nature to go through the world without making some enemies, still those not agreeing with him in all things will admit his integrity of purpose and his love of honesty.

REPORT

OF THE

COMMITTEE ON ORGANIZATION, REGISTRATION AND STATISTICS

THOS. FRANKLIN SMITH, M. D.,
CHAIRMAN

ORGANIZATION, REGISTRATION AND STATISTICS

STATISTICS OF

ORGANIZATIONS AND INSTITUTIONS DISPENSARIES

MEDICAL SOCIETIES MEDICAL JOURNALS

HOSPITALS

BY THOS. FRANKLIN SMITH, M. D.

REPORT OF THE COMMITTEE ON ORGANIZATION, REGISTRATION AND STATISTICS. THOS. FRANKLIN SMITH, M. D., CHAIRMAN

NATIONAL SOCIETIES

American Institute of Homœopathy. Organized 1844. Not incorporated. The annual meeting was held in Boston, Mass., from June 22 to 27, 1903. President, Joseph Pettee Cobb, M.D., 254 East Forty-seventh Street, Chicago, Ill. Secretary, Charles Gatchell, M.D., 100 State Street, Chicago, Ill. Number of members, 2,100; admitted this year, 160; died this year, 30. Annual dues, $5. Publishes its "Transactions."

International Hahnemannian Association. Organized 1880. Not incorporated. The annual meeting this year was held in Boston, Mass., in June. Secretary, John B. S. King, M.D., 6713 Wentworth Avenue, Chicago, Ill. We have been unable to obtain any report from this organization this year.

American Homœopathic Ophthalmological, Otological and Laryngological Society. Organized 1878. Not incorporated. The annual meeting was held in Boston, Mass., in June, 1903, at the same time as the American Institute. President, George B. Rice, M.D., 220 Clarendon Street, Boston, Mass. Secretary, J. Ivimey Dowling, M.D., 223 State Street, Albany, N. Y. Number of members, active, 164; honorary, 1; corresponding, 3; total, 168; admitted this year, 13; died this year, 1. Annual dues, $3. Publishes its "Transactions."

American Obstetrical Society. Organized 1885. Incorporated 1885. No meeting has been held for the past nine years, but it still retains its charter and is hoping that the interest in the work of the society may be revived at no distant period. President, John Nicholas Mitchell, M.D., 1505 Spruce Street, Philadelphia, Pa. Secretary, George W. Winterburn, M.D., 7 West One Hundred and Eighth Street, New York, N. Y. Number of members, 119.

American Association of Orificial Surgeons. Organized 1887. Incorporated 1887. The annual meeting is held in Chicago, Ill., in the month of September of each year. President, Lloyd G. Van Scoyoc, M.D., 416 Dearborn Building, Kansas City, Mo. Secretary, F. M. Rauqe, M.D., Roseville, Ill. Number of members, 331; admitted the past year, 27; died the past year, 1. Annual dues, $2.00. Publishes its "Transactions."

American Hahnemannian Association. This organization will, in all probability, unite with the International Hahnemannian Association. Secretary for this year is Frank W. Patch, M.D., Framingham, Mass.

National Association of Medical Examiners. Organized 1892. Not incorporated. The annual meeting was held in Boston, Mass., in June, 1903, during the session of the American Institute of Homœopathy. President, Augustus Korndoerfer, M.D., 1728 Green Street, Philadelphia, Pa. Secretary, Horace M. Paine, M.D., 67 North Forsyth Street, Atlanta, Ga. Number of members, 100. Annual dues, $1.00. Delegate, Horace M. Paine, M.D.

Society of Homœopathicians. No report has been received from this society, and it has been impossible to obtain any, as the Secretary refuses to make any.

Surgical and Gynæcological Association of the American Institute of Homœopathy. Organized 1899. Not incorporated. Annual meeting was held in Boston, Mass., in June, 1903, during the session of the American Institute of Homœopathy. President, Orange S. Runnels, M.D., 203 North Meridian Street, Indianapolis, Ind. Secretary, J. Wyllis Hassler, M.D., 1503 Poplar Street, Philadelphia, Pa. Number of members, 114. Annual dues, $5.00. Publishes its "Transactions." Delegate, Orange S. Runnels, M.D.

SECTIONAL OR INTERSTATE SOCIETIES

Interstate Homœopathic Medical Association. Organized 1894. Not incorporated. We have been unable to obtain any report from this society this year. The officers for last year were: President, Theodore Sureth, M.D., Scranton, Pa. Secretary, John B. Bates, M.D., Binghamton, N. Y.

Missouri Valley Homœopathic Medical Association. Organized 1876. Not incorporated. We have been unable to obtain any report of this organization this year. The officers for last year were: President, Phineas J. Montgomery, M.D., 217 Fourth Street, Council Bluffs, Iowa. Secretary, Lewis P. Crutcher, M.D., 423 Deardoff Building, Kansas City, Mo.

Southern Homœopathic Medical Association. Organized 1885. Incorporated 1885. The annual meeting is held in different cities in the South, alternately, in November of each year. The meeting of 1903 will be held in Louisville, Ky. President, George S. Coon, M.D., 617 Fourth Street, Louisville, Ky. Secretary, Lizzie Gray Gutherz, M.D., 3689 Olive Street, St. Louis, Mo. Number of members, 108; admitted the past year, 7. Annual dues, $2.00.

STATE SOCIETIES

Alabama Homœopathic Medical Association. Organized 1890. Incorporated 1890. We have been unable to obtain any report from this society this year. The officers for last year were: President, G. G. Lyon, M.D., Mobile, Ala. Secretary, A. E. Meadow, M.D., Blockton, Ala.

Arizona Homœopathic Medical Association. We have been unable to obtain any report from this society this year. The officers for last year were: President, L. Hyde, M.D., Phœnix, Ariz. Secretary, William L. Woodruff, M.D., Phœnix, Ariz.

California State Homœopathic Medical Society. Organized 1877. Incorporated 1877. The annual meeting is held in different places in the State, alternately, on the second Wednesday in May of each year. This year it was held in Los Angeles. President, Alfred C. Peterson, M.D., Spring Valley Building, San Francisco, Cal. Secretary, Guy E. Manning, M.D., Spring Valley Building, San Francisco, Cal. Number of members, 173; admitted the past year, 12; died the past year, 1. Annual dues, $2.00. Has published during the past year ex-President Boericke's address, "The Standing of Homœopathy"; "Is Hahnemann's Teaching Antiquated?" T. G. McConkey, M.D. All papers presented are published in the Pacific Coast Journal of Homœopathy. Delegates, Florence N. Ward, M.D., Edgar V. Van Norman, M.D.

Colorado Homœopathic Society. Organized 1881. Not incorporated. The annual meeting is held in different cities in the State, alternately, on the second Tuesday in September of each year. This year it will be held in Denver. President, C. W. Jenkins, M.D., Glenwood Spring, Colo. Secretary, Edwin Jay Clark, M.D., Steele Block, Denver, Colo. Number of members, 64; admitted the past year, 12. Annual dues, $2.00. All papers presented at the meeting are published in "The Critique." Delegates, C. W. Jenkins, M.D., C. H. Wilkinson, M.D.

Connecticut Homœopathic Medical Society. Organized 1851. Incorporated 1864. The annual meeting is held in New Haven and Hartford, alternately, on the third Tuesday in May of each year. The semi-annual meeting is held on the third Tuesday in October of each year, at such place as is determined upon at the annual meeting. President, C. N. Payne, M.D., Bridgeport, Conn. Secretary, Hills Cole, M.D., 926 Main Street, Hartford, Conn. Number of members, 104; admitted last year, 2. Annual dues, $3.00. Delegates, Harlan P. Cole, M.D., E. H. Linnell, M.D. Prints its "Transactions."

Medical Society of Delaware and the Peninsula. Organized 1883. Incorporated 1884. The annual meeting is held at the "Clayton House," Wilmington, Del., on the second Thursday in November of each year. President, Silas Frederick, M.D., 402 Delaware Avenue, Wilmington, Del. Secretary, Clara M. Ferguson, M.D., 830 West Street, Wilmington, Del. Number of members, 30; admitted the past year, 3; died the past year, 2. Annual dues, $2.00. Delegates, Frank F. Pierson, M.D., Egmont T. Negendank, M.D.

Illinois Homœopathic Medical Association. Organized 1855. Incorporated 1865. The annual meeting is usually held in Chicago, Ill., on the second Tuesday in May of each year. The semi-annual meeting is held in Chicago, Ill., on the second Tuesday in November of each year. President, Homer V. Halbert, M.D., 70 State Street, Chicago, Ill. Secretary, Burton Hazeltine, M.D., 100 State Street, Chicago, Ill. Number of members, 450; admitted the past year, 25; died the past year, 6. Annual dues, $2.00. Delegates, Homer V. Halbert, M.D., Burton Hazeltine, M.D., Wilson A. Smith, M.D.

Indiana Institute of Homœopathy. Organize [illegible] adelphia, The annual meeting is held in Indianapolis, Ind., [illegible] year, Friday in May of each year. President, H. H. Bak [illegible] B. retary, Samuel Harrell, M.D., Noblesville, Ind. Nun [illegible] ber admitted the past year, 8; died the past year, 1. [illegible] gates, Orange S. Runnels, M.D., J. A. Compton, M. [illegible] healthy and flourishing condition; its meetings are [illegible] tended by a large majority of the entire membership.

Hahnemann Medical Association of Iowa. Orga[illegible] 1873. The annual meeting is held in different cities on the second Tuesday in May of each year. President, M.D., 217 Fourth Street, Council Bluffs, Iowa. Secret M.D., Des Moines, Iowa. Number of members, 109; nu [illegible] year, 10. Annual dues, $2.00. Publishes its annual T. [illegible] elegates, George Royal, M.D., H. M. Humphrey, M.D.

Homœopathic Medical Society of the State of Kansas. Organized 1868. Incorporated 1870. The annual meeting is usually held in Topeka, Kan., on the first Tuesday in May of each year. President, Charles Lowry, M.D., Topeka, Kan. Secretary, Clay E. Coleman, M.D., Kansas City, Kan. Number of members, 55; number admitted the past year, 10. Annual dues, $1.00. Delegate, Clay E. Coleman, M.D.

Kentucky State Homœopathic Medical Society. Organized 1866. Incorporated 1887. The annual meeting is held in Lexington and Louisille, alternately, on the Wednesday and Thursday in the third week in May of each year. President, Chester Mayer, M. D., 900 Fourth Avenue, Louisville, Ky. Secretary, Hugh Clendenin, M.D., 628 Fourth Avenue, Louisville, Ky. Number of members, 75; admitted the past year, 5. Annual dues, $2.00. Delegate, George S. Coon, M.D. "Our society is doing some good work each year, and Homœopathy is advancing materially all over the State."

Hahnemann Medical Association of Louisiana. Organized 1872. Not incorporated. The annual meeting is held in New Orleans, La., in January of each year. President, Charles R. Mayer, M.D., 919 St. Charles Avenue, New Orleans, La. Secretary, John F. Crebbin, M.D., 1037 Peters Avenue, New Orleans, La. Number of members, 22; admitted the past year, 3. Annual dues, $3.00. Delegates, Charles R. Mayer, M.D., John G. Aiken, M.D.

Maine Homœopathic Medical Society. Organized 1867. Incorporated 1867. The annual meeting is held in different cities in the State, alternately, on the second Tuesday in June of each year. President, Walter V. Hanscom, M.D., Rockland, Me. Secretary, Cora M. Johnson, M.D., Skowhegan, Me. Number of members, 66; admitted the past year, 2; died the past year, 2. Annual dues, $1.00. Delegates, J. Frank Trull, M.D., John M. Prilay, M.D.

Maryland State Homœopathic Medical Society. Organized 1875. Incorporated 1875. The annual meeting is held in Baltimore, Md., on the third Tuesday in May of each year. The semi-annual meeting is held in different cities in Maryland, alternately, on the third Tuesday in October of each year. President, Eldridge C. Price, M.D., 1012 Madison Avenue, Baltimore, Md. Secretary, John A. Evans, M.D., 22 North Carey Street, Baltimore, Md. Number of members, 74; admitted the past year, 4; died the past year, 3. Annual dues, $3.00. Delegates, Eldridge C. Price, M.D., George T. Shower, M.D., O. Edward Janney, M.D.

Massachusetts Homœopathic Medical Society. Organized 1840. Incorporated 1856. The annual meeting is held in Boston, Mass., on the second Wednesday in April of each year. The semi-annual meeting is held in Boston, Mass., on the second Wednesday in October of each year. President, Nathaniel W. Emerson, M.D., 685 Boylston Street, Boston, Mass. Secretary, Frederick L. Emerson, M.D., 50 Hancock Street, Dorchester, Mass. Number of members, 351; admitted the past year, 12; died the past year, 4. Annual dues, $5.00. Publishes its "Transactions." Delegates, Nathaniel W. Emerson, M.D., John P. Rand, M.D., J. M. Barton, M.D., Charles R. Hunt, M.D., O. W. Roberts, M.D., John J. Shaw, M.D., J. Frank Trull, M.D.

Homœopathic Medical Society of the State of Michigan. Organized 1869. Incorporated 1869. Reincorporated 1900. The annual meeting is held in different cities in the State, alternately, on the third Tuesday in May of each year. The annual meeting this year was held in Grand Rapids on May 19 and 20.

Missouri [illegible]fred Graham, M.D., Warren Building, Detroit, Mich. Secretary, incorporate[illegible] Ball, M.D., Crapo Block, Bay City, Mich. Number of members, 130; this yea[illegible] the past year, 15. Annual dues, $2.00. Publishes its "Transactions." M.D., [illegible]gates, Daniel A. MacLachlan, M.D., Dean T. Smith, M.D.

M[illegible] Minnesota State Homœopathic Institute. Organized 1867. Not incorporated. The annual meeting is usually held in Minneapolis, Minn. We have been unable to obtain any report from this society this year. The officers for last year were: President, Henry W. Lufkin, M.D., Germania Bank Building, St. Paul, Minn. Secretary, Henry C. Aldrich, M.D., 313 Medical Block, Minneapolis, Minn.

Missouri Institute of Homœopathy. Organized 1876. Not incorporated. The annual meeting is held, alternately, in Kansas City, Mo., and St. Louis, Mo., on the third Tuesday in April of each year. President, Lewis P. Crutcher, M.D., Kansas City, Mo. Secretary, G. A. Mellies, M.D., St. Louis, Mo. Number of members, 232; admitted the past year, 7. Annual dues, $2.00. Delegates, W. E. Reily, M. D., J. N. Patterson, M.D.

Nebraska State Homœopathic Medical Society. Organized 1873. Incorporated 1873. The annual meeting is held, alternately, in Lincoln and Omaha, Neb., on the second Thursday and Friday in April of each year. This year it was held in Lincoln. President, Frank E. Way, M.D., Wahoo, Neb. Secretary, E. Arthur Carr, M.D., 14 South Twelfth Street, Lincoln, Neb. Number of members, 208; admitted the past year, 8. Annual dues, $1.00.

Homœopathic Medical Society of the State of New Hampshire, Organized 1852. Incorporated 1853. The annual meeting is held in Concord, N. H., on the first Wednesday in June of each year. President, R. V. Sweet, M.D., Rochester, N. H. Secretary, Channing Bishop, M.D., Bristol, N. H. Number of members, 70; admitted the past year, 4; died the past year, 1. Annual dues, $1.00. Delegates, F. D. Worcester, M.D., Charles E. Dodge, M.D.

New Jersey State Homœopathic Medical Society. Organized 1853. Incorporated 1870. The annual meeting is movable, but is usually held in Newark or Trenton, alternately, on the first Tuesday in May in each year. The meeting this year was held at Deal Beach, N. J. The semi-annual meeting is held in different cities in the State of New Jersey, alternately, the last one was held in Plainfield, N. J. President, James Franklin Ackerman, M.D., 905 Grand Avenue, Asbury Park, N. J. Secretary, Isaac Cooper, M.D., Trenton, N. J. Number of members, 200; admitted the past year, 12. Annual dues, nominal.

Homœopathic Medical Society of the State of New York. Organized 1850. Incorporated 1862. The annual meeting is held in Albany, N. Y., on the second Wednesday and Tuesday in February of each year. The semi-annual meeting is held in different cities in the State, alternately, in the autumn of each year. President, John Wesley LeSeuer, M.D., Batavia, N. Y. Secretary, De Witt G. Wilcox, M.D., 597 Elmwood Avenue, Buffalo, N. Y. Number of members, 494; admitted the past year, 46; died the past year, 9. Annual dues, $3.00. Publishes its "Transactions." Delegates, William S. Garnsey, M.D., Eugene H. Porter, M.D. "The Society was never in a more prosperous condition. The meetings have been unusually good during the past two or three years."

Homœopathic Medical Society of the State of Ohio. Organized 1864. Not incorporated. The annual meeting is held in different cities in the State, alternately, on the second Tuesday in May of each year. President, Willard B. Carpenter, M.D., 657 North High Street, Columbus, Ohio. Secretary, Charles E. Silbernagel, M.D., 1033 North High Street, Columbus, Ohio. Number of members, 246; admitted the past year, 11; died the past year, 6. Annual dues, $3.00. Publishes its "Transactions." Delegates, Harris H. Baxter, M.D., Thomas M. Stewart, M.D.

Homœopathic Medical Society of the State of Oregon. Organized 1876. Incorporated 1876. The annual meeting is held in Portland, Ore., on the second Tuesday in June of each year. We have been unable to obtain any report from this society for this year.

Homœopathic Medical Society of the State of Pennsylvania. Organized 1866. Incorporated 1896. The annual meeting is held, alternately, in different cities in the State in September of each year. The semi-annual meeting is held, alternately, in different cities in the state in the month of March of each year. President, Oliver Sloan Haines, M.D., 137 North Fifteenth Street, Philadelphia,

Pa. Secretary, Edward M. Gramm, M.D., 1833 Chestnut Street, Philadelphia, Pa. Number of members, 357; admitted the past year, 12; died the past year, 3. Annual dues, $5.00. Publishes its "Transactions." Delegates, William B. Van Lennep, M.D., John E. James, M.D.

Rhode Island State Homœopathic Medical Society. Organized 1850. Incorporated 1850. The annual meeting is held in Providence, R. I., on the second Friday in January of each year. Quarterly meetings are held in Providence, R. I., on the second Fridays in the months of April, July and October of each year. President, Henry M. Sanger, M.D., 1040 Westminster Street, Providence, R. I. Secretary, R. S. Phillips, M.D., Providence, R. I. Number of members, 47; admitted the past year, 3; died the past year, 2. Annual dues, $5.00. Delegates, George B. Peck, M.D., Henry M. Sanger, M.D.

Homœopathic Medical Society of South Dakota. Organized 1893. Incorporated 1893. The annual meeting is held in different cities in the state, in the month of June of each year; the meeting of 1904 will be held in Redfield. President, Charles A. Bower, M.D., Mitchell, S. Dak. Number of members, 48; admitted the past year, 1; died the past year, 1. Annual dues, $1.00.

Homœopathic Medical Society of the State of Tennessee. Organized 1875. Incorporated 1890. The annual meeting is held, alternately, in different cities in the State, but at no regular time; the time and place is determined at the last previous meeting. President, T. E. Emloe, M.D., Nashville, Tenn. Secretary, Edward Harper, 111 Bourbon Street, New Orleans, La. Number of members, 40. Annual dues, $0.00. "The Society has held no meetings for the past four years, and it is doubtful if it will ever hold another one, as it is practically dead. The charter and books are in the hands of the old Secretary."

Texas Homœopathic Medical Association. Organized 1884. Incorporated 1884. The annual meeting is held in different cities in the State, alternately, usually on the second Wednesday in October of each year. For several years it has been held at Dallas, Texas. President, William L. Smith, M.D., Denison, Texas. Secretary, Julia H. Bass, M.D., Austin, Texas. Number of members, 45; admitted the past year, 9; died the past year, 1. Annual dues, $1.00.

Vermont Homœopathic Medical Society. Organized 1854. Incorporated 1858. We have been unable to obtain any report from this society for this year. The annual meeting is held in Montpelier, Vt., on the third Wednesday in May of each year. The semi-annual meeting is held, alternately, in different cities in the State, on the third Wednesday in October of each year. The last officers of which we have any report were: President, E. E. Whitaker, M.D., Newport, Vt. Secretary, Walter H. Weeks, M.D., East Hardwick, Vt.

Hahnemann Medical Society of the Old Dominion. Organized 1880. Not incorporated. The annual meeting is held in different cities in the State, alternately, in the month of October or November of each year. President, W. Peyton Moncure, M.D., Fairfax, Va. Secretary, Harry Burgoyne Baker, M.D., 1 East Grace Street, Richmond, Va. Number of members, 20. Delegates, Frank P. Webster, M.D., Harry B. Baker, M.D.

West Virginia Homœopathic Medical Society. Organized 1898. Not incorporated. The annual meeting is held, alternately, in different cities in the State, in the month of May in each year. President, J. R. McCleary, M.D., Marietta, Ohio. Secretary, Arthur A. Roberts, M.D., Wellsburg, W. Va. Number of members, 15; admitted the past year, 3. Annual dues, $3.00. "Our little society is still on the progressive list, and when it is considered that out of twenty homœopathic physicians in the entire State of West Virginia, fifteen belong to our baby society, it will be seen that we are doing some good. A feeling of good-fellowship exists, with no strife to spoil or interfere with the pleasure and enjoyment of our meetings. At the October meeting the society unanimously adopted President Wood's address in regard to affiliation of different schools of medicine. At the last term of our State Legislature we introduced a bill, asking for representation on our State Board of Health, but the bill was lost by just one vote in the Senate, and that one was cast by a Christian Scientist. Dr. J. W. Morris, one of the members of this society, has been the Homœopathic Examiner on the Allopathic Board of Health for the last two years. Another feature of our legislative measure was to secure a clause of reciprocity in favor of physicians living in neighboring States, whose practice might require them to come into West Virginia."

Washington State Homœopathic Medical Society. Organized 1889. Not incorporated. The annual meeting is held, alternately, in the cities of Seattle, Tacoma and Spokane, on the second Thursday in June of each year. We have been unable to obtain any report from this society for the past two years.

Homœopathic Medical Society of the State of Wisconsin. Organized 1864. Incorporated 1868. The annual meeting is held, alternately in Milwaukee and some other large city in the State, on the third Wednesday in May of each year. President, Edward Everett, M.D., Madison, Wis. Secretary, Milton A. Barndt, M.D., 307 Grand Street, Milwaukee, Wis. Number of members, 107; admitted the past year, 3. Annual dues, $2.00. Publishes its "Transactions" in the Medical Magazine. Delegate, Eugene W. Beebe, M.D. The annual meeting this year was held in Oshkosh, Wis., May 27 and 28.

LOCAL SOCIETIES

ARKANSAS

Little Rock Homœopathic Medical Society. Organized 1900. Not incorporated. The annual meeting is held in Little Rock, Ark. Monthly meetings are held in the same place. President, William E. Green, M.D., 202 Center Street, Little Rock, Ark. Secretary, Zuber N. Short, M.D., Hot Springs, Ark. Number of members, 30. Annual dues, $5.00. Delegate, William E. Green, M.D.

CALIFORNIA

Alameda County Homœopathic Medical Society. Organized 1877. Not incorporated. The annual meeting is held at 1068 Broadway, Oakland, Cal., on the second Tuesday in October of each year. Monthly meetings are held in the same place on the second Tuesday of each month. We have been unable to obtain any report from this society for the past two years.

San Francisco Homœopathic Medical Society. Organized 1893. Not incorporated. The annual meeting is held in San Francisco, Cal., on the second Friday in January of each year. Monthly meetings are held in the offices of the members, alternately, on the second Friday in each month. President, Guy E. Manning, M.D., Spring Valley Building, San Francisco, Cal. Secretary, Laura B. Hurd, M.D., 706 Sutter Street, San Francisco, Cal. Number of members, 93; admitted the past year, 1; died the past year, 1. Annual dues, $1.00. Publishes papers read at the meetings in the Pacific Coast Journal of Homœopathy.

Southern California Homœopathic Medical Society. Organized 1895. Incorporated 1895. The annual meeting is usually held in Los Angeles, Cal., on the second Wednesday in October of each year. President, Myron H. Chamberlin, M.D., Monrovia, Cal. Secretary, Frank S. Barnard, M.D., 444 Douglass Building, Los Angeles, Cal. Number of members, 79; admitted the past year, 5; died the past year, 1. Annual dues, $1.00. "The Pacific Coast Journal of Homœopathy is the official organ of this society, and its transactions are published in that journal."

Homœopathic Hospital Association of Southern California. Organized 1895 Incorporated 1895. The annual meeting is held in Los Angeles, Cal., on the first Tuesday in March of each year. Monthly meetings are held in the same place on the first Tuesday in each month. We have been unable to obtain any report of this society for the past year. The officers for last year were: President, James Foord, M.D., 218 North Main Street, Los Angeles, Cal. Secretary, Frank S. Barnard, M.D., 444 Douglass Building, Los Angeles, Cal.

CONNECTICUT

Bridgeport Homœopathic Medical Society. Organized 1895. Not incorporated. The annual meeting is held in Bridgeport, Conn., on the third Tuesday in September of each year. Monthly meetings are held in the same place on the third Tuesday in each month. President, Edward S. Smith, M.D., 433 West Avenue, Bridgeport, Conn. Secretary, David W. Ingalls, M.D., 461 State Street, Bridgeport, Conn. Number of members, 8. Annual dues, $1.00. Delegate, David W. Ingalls, M.D.

New Haven County Homœopathic Medical Society. Organized 1900. Not incorporated. The annual meeting is held in New Haven, Conn., in the month of October of each year. Monthly meetings are held in the same place. Presi-

dent, John A. Hutchinson, M.D., New Haven, Conn. Secretary, Henry P. Sage, M.D., 48 Howe Street, New Haven, Conn. Number of members, 24; admitted the past year, 3. Annual dues, $1.00. Delegate, Henry P. Sage, M.D.

DISTRICT OF COLUMBIA

Washington Homœopathic Medical Society. Organized 1870. Incorporated 1870. The annual meeting is held in Washington, D. C., on the first Tuesday in December of each year. Monthly meetings are held in the same place on the first Tuesday in each month. President, George W. N. Custis, M.D., 110 East Capitol Street, Washington, D. C. Secretary, Alfred H. Taylor, M.D., 485 H Street, S. W., Washington, D. C. Number of members, 55; admitted the past year, 1; died the past year, 3. Annual dues, $2.00. Delegates, J. B. Gregg Custis, M.D., Richard Kingsman, M.D.

ILLINOIS

Central Illinois Homœopathic Medical Association. Organized 1897. Not incorporated. The annual meeting is usually held in Bloomington, Ill., on the third Tuesday in May of each year. The semi-annual meeting is held in different cities in the State, alternately, on the third Tuesday in October of each year. President, Samuel Bishop, M.D., Bloomington, Ill. Secretary, William E. Neiberger, M.D., Bloomington, Ill. Number of members, 63; admitted the past year, 2. Annual dues, $1.00. Delegates, Charles H. Long, M.D., W. H. Stidue, M.D.

Clinical Society of Hahnemann Hospital of Chicago. Organized 1877. Not incorporated. The annual meeting is held in Hahnemann College, Chicago, Ill., on the last Monday in April of each year. Monthly meetings are held in the same place on the last Monday in each month. President, C. D. Collins, M.D., 92 State Street, Chicago, Ill. Secretary, Charles V. Martin, M.D., 3901 Cottage Grove Avenue, Chicago, Ill. Number of members, 125; admitted the past year, 17. Annual dues, $1.00. Publishes its transactions in "The Clinique."

Homœopathic Medical Society of Chicago. Organized 1894. Not incorporated. The annual meeting is held at the "Great Northern Hotel," Chicago, Ill., on the third Thursday in April of each year. Monthly meetings are held in the same place on the third Thursday in each month, from September to April, inclusive. President, Mary Elizabeth Hawks, M.D., 103 State Street, Chicago, Ill. Secretary, W. Henry Wilson, M.D., 3129 Rhodes Avenue, Chicago, Ill. Number of members, 107; admitted the past year, 6; died the past year, 4. Annual dues, $2.00. "The work of the year is assigned to Bureaus; each Bureau has a chairman who is responsible for his particular meeting."

"The Old Guard." Organized 1896. Not incorporated. The annual meeting is held at the "Palmer House," Chicago, Ill., on the first Tuesday in June of each year. President, Lemuel C. Grosvenor, M.D., 185 Lincoln Avenue, Chicago, Ill. Number of members, 50; died the past year, 1, Thomas C. Duncan, M.D. Delegate, Lemuel C. Grosvenor, M.D. "Personal and usually very interesting reminiscences of long practice have filled the hours, which were very interesting and very social. The 'Old Guard' is composed of Homœopathic physicians, residing in Chicago or vicinity, who have been thirty or more years graduates."

Desplaines Valley Medical Society. Organized 1898. Not incorporated. The annual meeting is held in Joliet on the third Thursday in December of each year. Monthly meetings are held in the same place on the third Thursday of each month. President, A. R. Fouser, M.D., Canton, Ill. Secretary, H. M. Beckwith, M.D., Joliet, Ill. Numbers, 19. "This society has not met during the last year, hence is temporarily dead."

Englewood Homœopathic Medical Society. Organized 1897. Not incorporated. The annual meeting is held in Englewood, Ill., on the second Tuesday in May of each year. Semi-monthly meetings are held in the same place, at the offices of the different members, alternately, on the second and fourth Tuesdays in each month. President, James West Hingston, M.D., 441 West Sixty-fifth Street, Chicago, Ill. Secretary, Della M. MacMullen, M.D., 6502 Wentworth Avenue, Chicago, Ill Number of members, 36; admitted the past year, 2. Annual dues, $1.00.

Northwestern Illinois Homœopathic Medical Society. Organized 1895. Incorporated 1895. We have been unable to obtain any report from this society for the past year.

Rock River Institute of Homœopathy. Organized 1881. Not incorporated. The annual meeting is held in various cities, alternately, on the first Wednesday in October of each year. Quarterly meetings are held in different places in the State, alternately, in the months of January, April and July of each year. President, Charles Lanning, M.D., Morrison, Ill. Secretary, Arthur W. Blunt, M.D., Clinton, Iowa. Number of members, 32; admitted the past year, 3. Annual dues, fifty cents. Delegate, O. B. Blackman, M.D.

INDIANA

Allen County Homœopathic Medical Society. Organized 1901. Not incorporated. The annual meeting is held in Fort Wayne, Ind., in the month of January of each year. Monthly meetings are held at the residences of different members in Fort Wayne, alternately. President, George W. Bowen, M.D., East Washington Street, Fort Wayne, Ind. Secretary, H. G. Merz, M.D., 1018 West Jefferson Street, Fort Wayne, Ind. Number of members, 11; admitted the past year, 2. Have published occasional papers prepared for the monthly meetings in the medical journals.

Evansville Homœopathic Medical Society. Organized 1894. Not incorporated. The annual meeting is held in Evansville, Ind., on the first Tuesday in December of each year. Monthly meetings are held at the offices of the different members, alternately, on the first Tuesday in each month. President, D. B. Cain, M.D., Evansville, Ind. Secretary, Theodore H. Taylor, M.D., 309½ Upper Second Street, Evansville, Ind. Number of members, 7. Annual dues, $2.00.

Indianapolis Homœopathic Medical Society. Organized 1894. Not incorporated. Semi-monthly meetings are held in the parlors of Hotel English, Indianapolis, Ind., on every other Tuesday evening in each month from September to May, inclusive, of each year. President, A. A. Ogle, M.D., 2314 East Washington Street, Indianapolis, Ind. Secretary, William E. George, M.D., Marion Building, Indianapolis, Ind. Number of members, 15. Annual dues, $4.00. Delegate, Orange S. Runnels, M.D.

Northern Indiana and Southern Michigan Homœopathic Medical Association. Organized 1891. Not incorporated. The annual meeting is held in Elkhart, Ind., on the fourth Tuesday in April of each year. The semi-annual meeting is held in the same place on the fourth Tuesday in September of each year. President, Bulia D. Godfray, M.D., South Bend, Ind. Secretary, Henry A. Mumaw, M.D., Elkhart, Ind. Number of members, 98; admitted the past year, 12. Annual dues, $1.00.

IOWA

Central Homœopathic Association of Iowa. Organized 1878. Incorporated 1879. The annual meeting is held in Cedar Rapids, Iowa, on the third Wednesin July of each year. The semi-annual meeting is held in different places in the State, alternately, on the first Wednesday after Christmas of each year. President, T. J. Becker, M.D., Iowa City, Iowa. Secretary, Charles H. Cogswell, M.D., Cedar Rapids, Iowa. Number of members, 45. Delegate, Charles H. Cogswell, M.D.

Council Bluffs Homœopathic Medical Society. We have been unable to obtain any report from this society for this year.

Des Moines Homœopathic Medical Society. Organized 1883. Not incorporated. The annual meeting is held in Waterloo, Iowa, on the second Tuesday in January of each year. Monthly meetings are held in Des Moines, Iowa, on the second Tuesday in each month. We have been unable to obtain any report from this society for the past year. The officers last year were: President, O. J. Lorzeaux, M.D., East Fourteenth Street and Grand Avenue, Des Moines, Iowa. Secretary, Erwin Schenck, M.D., 2001 Forest Avenue, Des Moines, Iowa.

Northwestern Iowa Homœopathic Medical Society. Organized 1896. Not incorporated. We have been unable to obtain any report from this society for the past year.

Sioux City Homœopathic Medical Association. Organized 1889. Not incorporated. The annual meeting is held in Sioux City, Iowa, on the first Tuesday in March of each year. Monthly meetings are held in the same place on the first Tuesday in each month. President, John L. Hanchette, M.D., Toy Building, Sioux City, Iowa. Secretary, J. N. Kilborn, M.D., Sioux City, Iowa. Number

of members, 16; died the past year, 1. Annual dues, $1.00. Delegate, John L. Hanchette, M.D. "This has been purely a Materia Medica year, twenty-four remedies having been considered and discussed."

KANSAS

Topeka Homœopathic Medical Society. Organized 1901. Not incorporated. The annual meeting is held in Topeka, Kan. Monthly meetings are held in the same place. President, Charles Lowry, M.D., Topeka, Kan. Secretary, Charles H. Lanning, M.D., 730 Kansas Avenue, Topeka, Kan. Number of members, 9; died the past year, 1. Annual dues, $1.00.

KENTUCKY

Falls Cities Homœopathic Medical Society. Organized 1897. Not incorporated. The annual meeting is held in the Southwestern Homœopathic College Building, Louisville, Ky., on the second Friday of October of each year. Monthly meetings are held in the same place on the second Friday of each month. President, E. J. Wunderlich, M.D., 1702 Chestnut Street, Louisville, Ky. Secretary, Samuel E. Stanley, M.D., 715 Second Street, Louisville, Ky. Number of members, 25; admitted the past year, 3. Annual dues, twenty-five cents. Delegate, George S. Coon, M.D.

West Kentucky Homœopathic Medical Society. Organized 1902. Not incorporated. Quarterly meetings are held in different places in the western part of the State. President, C. J. Pollard, M.D., Princeton, Ky. Secretary, L. O. Wood, M.D., Hopson, Ky. Number of members, 35.

MASSACHUSETTS

Boston Homœopathic Medical Society. Organized 1873. Incorporated 1873. The annual meeting is held in Boston, Mass., on the first Thursday in January of each year. Monthly meetings are held in the same place on the first Thursdays from October to June, inclusive, of each year. President, William F. Wesselhoeft, M.D., 176 Commonwealth Avenue, Boston, Mass. Secretary, Henry O. Spalding, M.D., 50 Seaverns Avenue, Jamaica Plain, Boston, Mass. Number of members, 260; admitted the past year, 7; died the past year, 1. Annual dues, $2.00. Has published a "Year Book," containing Constitution, By-Laws, Transactions, and Directory of Members.

Essex County Homœopathic Medical Society. Organized 1871. Not incorporated. The annual meeting is held in Salem, Mass., on the last Wednesday in October of each year. Monthly meetings are held in Salem and Lynn, alternately, on the last Wednesday in each month. We have been unable to obtain any report from this society for the past two years.

Massachusetts Surgical and Gynæcological Society. Organized 1877. Not incorporated. The annual meeting is held in Boston, Mass., on the second Wednesday in December of each year. The semi-annual meeting is held in the same place on the second Wednesday in June of each year. President, Neidhard H. Houghton, M.D., 367 Boylston Street, Boston, Mass. Secretary, T. Morris Strong, M.D., 176 Huntington Avenue, Boston, Mass. Number of members, 212; admitted the past year, 21; died the past year, 5. Annual dues, $2.00. Publishes its "Proceedings" in different journals. Delegate, Neidhard H. Houghton, M.D.

Homœopathic Medical Society of Western Massachusetts. Organized 1877. Not incorporated. The annual meeting is held in Springfield, Mass., on the third Wednesday in March of each year. Quarterly meetings are held in the same place on the third Wednesdays in June, September and December of each year. President, Plumb Brown, M.D., 503 State Street, Springfield, Mass. Secretary, Robert F. Hovey, M.D., Springfield, Mass. Number of members, 62; admitted the past year, 2; died the past year, 1. Annual dues, $1.00. Delegates, W. F. Harding, M.D., George Rhodes, M.D.

Worcester County Homœopathic Medical Society. Organized 1866. Not incorporated. The annual meeting is held in Worcester, Mass., on the second Wednesday in November of each year. Quarterly meetings are held, alternately, in different places in the State, on the second Wednesday in February, May and August of each year. President, C. R. Miller, M.D., Leominster, Mass. Secretary, Edwin Roy Leib, M.D., 49 Pleasant Street, Worcester, Mass. Num-

ber of members, 78; admitted the past year, 3. Annual dues, $1.00. Delegate, Harry C. Cheeney, M.D.

MICHIGAN

Homœopathic Medical Society of Western Michigan. Organized 1902. Not incorporated. The annual meeting is held in Grand Rapids, Mich., on the third Wednesday in December of each year. Monthly meetings are held in the same place on the third Wednesday in each month, from September to May, inclusive. President, M. C. Sinclair, M.D., Widdicomb Building, Grand Rapids, Mich. Secretary, F. D. Harter, M.D., 41 Porter Block, Grand Rapids, Mich. Number of members, 45. Annual dues, $1.00. Delegates, A. L. Ruff, M.D., F. D. Harter, M.D.

Homœopathic Medical Society of Southwestern Michigan. Organized 1866. Not incorporated. The annual meeting is held in Kalamazoo, Mich., on the first Tuesday in February of each year. Bi-monthly meetings are held in different places, alternately, on the first Tuesdays in the months of April, June, August, October and December of each year. We have been unable to obtain any report from this society for the past year. The officers for last year were: President, Albert B. Cornell, M.D., Kalamazoo, Mich. Secretary, Nancy B. Sherman, M.D., Janesville, Wis.

Detroit Homœopathic Practitioners' Society. Organized 1894. Not incorporated. The annual meeting is held in the "Griswold House," Detroit, Mich., on the first Thursday in June of each year. Monthly meetings are held in the same place on the first Thursday in each month. President, William R. McLaren, M.D., 213 Woodward Avenue, Detroit, Mich. Secretary, George M. Augustin, M.D., 469 Third Avenue, Detroit, Mich. Number of members, 31; admitted the past year, 8. Annual dues, $1.00. "The society has been more prosperous the past year than in any previous year of its existence. The meetings have had a larger average attendance than ever before."

Hahnemann Medical Society of Detroit Medical College. Organized 1899. Not incorporated. The annual meeting is held in the College Building, Detroit, Mich. President, William M. Bailey, M.D., 25 Miami Avenue, Detroit, Mich. Secretary, Sarah E. Fitch, M.D., Detroit, Mich. Number of members 29; admitted the past year, 9. Annual dues, 50 cents. "We hope to be able to give a better report next year."

Saginaw Valley Homœopathic Medical Association. Organized 1901. Not incorporated. The annual meeting is held in Saginaw, Mich., on the first Monday in May of each year. Bi-monthly meetings are held in Saginaw and Bay City, alternately, on the first and third Mondays in each month. President, C. W. Edmunds, M.D., Crapo Building, Bay City, Mich. Secretary, Harriet A. Knott, M.D., Avery Building, Saginaw, Mich. Number of members 24; admitted the past year, 4; died the past year,1. Annual dues, $1.00. Has published some of the papers read before the society. Delegate Joseph H. Ball, M. D. "This society has aimed, first of all, to promote good fellowship and knowledge amongst its members. This has been accomplished: (1) By having banquets, luncheons and informal sociables at its meetings. (2) By lectures from prominent men outside of the membership of the society; among these have been Willard B. Hinsdale, M.D., Ann Arbor, Mich; Dean T. Smith, M.D., Ann Arbor, Mich.; Claudius B. Kinyon, M.D., Ann Arbor, Mich.; J. C. Avery, M.D., Vassar. All of these lectures have been published, with the exception of that by Dr. Kinyon. (3) By taking an active part in legislation, especially the Nottingham bill. (4) By the stimulation of the study of clinical cases. (5) By papars from members of the society."

MINNESOTA

St. Paul's Society of Homœopathic Medicine and Surgery. Organized 1894. Not incorporated. The annual meeting is held in St. Paul, Minn., on the first Monday in January of each year. Monthly meetings are held in the same place on the first Monday in each month. We have been unable to obtain any report from this society during the past year. The officers for last year were: President, Oscar H. Hall, M.D., Ernst Building, St. Paul, Minn. Secretary, Reginald B. Leach, M.D., Ernst Building, St. Paul, Minn.

MISSOURI

Organon Society of Kansas City. We have been unable to obtain any report from this society this year.

St. Louis Homœopathic Medical Society. Organized 1886. Not incorporated. The annual meeting is held at the West End Hotel St. Louis, Mo., on the second Saturday in October of each year. Semi-monthly meetings are held in the same place on the second and fourth Saturdays in each month. We have been unable to obtain any report from the society for the past year. The officers for last year were: President, H. W. Hartwell, M.D., 3984 Washington Avenue, St. Louis, Mo. Secretary, F. W. Lester, M.D., 2016 Victor Street, St. Louis, Mo.

NEBRASKA

Omaha Homœopathic Medical Society, Omaha, Neb. Organized 1889. Incorporated 1889. President, Pierre Colon Moriarity, M.D., 320 Bee Building, Omaha, Neb. Secretary, Abby Virginia Holmes, M.D., 513 Paxton Block, Omaha, Neb. Number of members, 50; number admitted the past year, 4; number deceased the past year, 2. Annual dues, $1.00.

Omaha Homœopathic Medical Society. Organized 1879. Incorporated 1879. The annual meeting is held in Omaha, Neb. President, Pierre Colon Moriarity, M.D., 320 Bee Building, Omaha, Neb. Secretary, Abby Virginia Holmes, M.D., 513 Paxton Block, Omaha, Neb. Number of members, 30; admitted the past year, 6; died the past year, 1. Annual dues, $1.00. Delegate, Abby Virginia Holmes, M.D.

NEW JERSEY

West Jersey Homœopathic Medical Society. Organized 1869. Not incorporated. The annual meeting is held in the Homœopathic Hospital, Camden, N. J., on the third Wednesday in May of each year. Quarterly meetings are held in the same place on the third Wednesdays in the months of August, November and February of each year. President, L. N. Slaughter, M.D., Pitman Grove, N. J. Secretary, Wallace McGeorge, M.D., 521 Broadway, Camden, N. J. Number of members, 59; admitted the past year, 6; died the past year, 2. Annual dues, $1.00. Has published the papers read before the society in the medical journals. "This year two of our members, Silas H. Quint, M.D., and Erving M. Howard, M.D., became Seniors, having been elected in May, 1878. The society is in a very healthy condition. Six of the original members who organized the society are still with us and are doing active work among us. We have ten Senior members. The attendance of members and visitors at our meet ings last year averaged twenty-seven at each meeting."

NEW YORK

Albany County Homœopathic Medical Society. Organized 1861. Incorporated 1882. The annual meeting is held in Binghamton, N. Y., on the third Thursday in January of each year. Quarterly meetings are held in the same place on the second Thursdays in April, July and October of each year. We have been unable to obtain any report from this society for the past year. The officers for last year were: President, J. Ivemy Dowling, M.D., 223 State Street, Albany, N. Y. Secretary, Frederick J. Cox, M.D., 109 State Street, Albany, N. Y.

Brooklyn Hahnemann Union. Organized 1896. Not incorporated. The annual meeting is held at 209 Hancock Street, Brooklyn, N. Y., on the last Saturday in January of each year. Monthly meetings are held in the same place on the last Saturday evening of each month. The President is chosen at each meeting. Secretary, Mrs. Evangeline L. Close, 209 Hancock Street, Brooklyn, N. Y. Number of members, 19; admitted the past year, 5. "The papers presented at each meeting by the chairman are often sent to the medical journals."

Broome County Homœopathic Medical Society. Organized 1863. Incorporated 1882. The annual meeting is held in Binghampton, N. Y., on the third Wednesday in June of each year. The semi-annual meeting is usually held in the same place on the third Wednesday in December of each year. We have been unable to obtain any report from this society for the past year.

Chenango County Homœopathic Medical Society. Organized 1871. Incorporated 1872. The annual meeting is held in Norwich, N. Y., on the third Tuesday in January of each year. The semi-annual meeting is held, alternately, at different places in the county, on the third Tuesday in June of each year. President, Robert E. Miller, M.D., Oxford, N. Y. Secretary, F. Eugene Roper, M.D., Norwich N. Y. Number of members, 5. Annual dues, $1.00. Delegate, Robert E. Miller, M.D.

Cortland County Homœopathic Medical Society. Organized 1879. Not incorporated. The annual meeting is held in Cortland, N. Y., on the third Thursday in May of each year. Quarterly meetings are held at Cortland and Homer, alternately, on the third Thursdays in the months of February, August and November of each year. President, Leonard W. Potter, M.D., Homer, N. Y. Secretary, Ellis M. Santee, Cortland, N. Y. Number of members, 8. Annual dues, $1.00. Delegate, Ellis M. Santee, M.D.

Central New York Homœopathic Medical Society. Organized 1865. Incorporated 1866. The annual meeting is held in Syracuse, N. Y., on the third Thursday in September of each year. Quarterly meetings are held in Syracuse and Rochester, N. Y., alternately, on the third Thursdays in the months of December, March and June of each year. President Rollo C. Grant, M. D., 823 South Avenue, Rochester, N. Y. Secretary, S. L. Guild Leggett, M. D., 352 West Onondaga Street, Syracuse, N. Y. Number of members, 40; admitted the past year, 4; died the past year, 1. Annual dues, $1.00. Publishes its "Transactions" in the *Medical Advance*. Delegate, S. L. Guild-Leggett, M.D.

Dutchess County Homœopathic Medical Society. Organized 1860. Incorporated 1868. The annual meeting is held in Poughkeepsie, N. Y., on the third Tuesday in October of each year. The semi-annual meeting is held in different places in the County, on the third Tuesday in May of each year. President, John H. Otis, M.D., 319 Mill Street, Poughkeepsie, N. Y. Secretary, A. L. Peckham, M.D., 31 Cannon Street, Poughkeepsie, N. Y. Number of members, 10; died the past year, 1. Annual dues, $1.00. "A year ago our society got together the Homœopathic physicians of Dutchess, Orange and Ulster Counties, where there are no Homœopathic societies, and organized a Tri-County Society, whose Secretary is F. A. Jacobus, M.D., Newburg, N. Y. Our Dutchess County Society still keeps its organization and meetings, independently of the new society."

Homœopathic Medical Society of Dutchess, Orange and Ulster Counties. Organized 1902. Not incorporated. The annual meeting is held in different places in the three counties, alternately, on the third Tuesday in May of each year. The semi-annual meeting is held in different places, alternately, in the three counties, on the third Tuesday in October of each year. President, John C. Otis, M.D., 319 Mill Street, Poughkeepsie, N. Y. Secretary, Frank A. Jacobson, M.D., 269 Grand Street, Newburg, N. Y. Number of members, 14; admitted the past year, 2. Delegate, John C. Otis, M.D.

Homœopathic Medical Society of the County of Kings. Organized 1857. Incorporated 1857. The annual meeting is held at Arcanum Hall, 1256 Bedford Avenue, Brooklyn, N. Y., on the second Tuesday in January of each year. Monthly meetings are held in the same place on the second Tuesday of each month with the exception of July and August. President, W. J. Shrewsbury, M.D., 238 Keep Street, Brooklyn, N. Y. Secretary, Ralph L. Lloyd, M.D., 450 Ninth Street, Brooklyn, N. Y. Number of members, 142; admitted the past year, 5; died the past year, 2. Annual dues, $3.00. Publishes its "Annual Directory." "A movement looking towards the erection or purchase of our own home is in action and the outlook is very favorable."

Homœopathic Medical Society of the County of New York. Organized 1857. Incorporated 1857. The annual meeting is held in Carnegie Hall, West Fifty-seventh Street, New York City, on the second Thursday in December of each year. Monthly meetings are held in the same place on the second Thursday of each month from October to June, inclusive. President, Irving Townsend, M.D., 62 West Fifty-first Street, New York City. Secretary, Walter Sands Mills, M.D., 324 West Eighty-ninth Street, New York City. Number of members, 270 active members, and 100 corresponding members. Annual dues, $3.00. Published the annual address of the President, William H. Van den Burg, M.D.

Jefferson County Homœopathic Medical Society. Organized 1888. Incorporated 1888. The annual meeting is held in Watertown, N. Y., on the third Wednesday in October of each year. Quarterly meetings are held in the same place on the third Wednesdays in February and June of each year. We have been unable to obtain any report from this society for the past year.

Homœopathic Medical Society of Madison County. Organized 1865. Not incorporated. The annual meeting is held in Oneida, N. Y., on the fourth Tuesday of June of each year. The semi-annual meeting is held in different places in the County, alternately, on the fourth Tuesday in December of each year. President, G. B. Palmer, M.D., Hamilton, N. Y. Secretary, Jason T. Wallace, M.D., Oneida, N. Y. Number of members, 8.

Medico-Chirurgical Society of Central New York. Organized 1896. Not incorporated. The annual meeting is held in Syracuse, N. Y., on the first Thursday in June of each year. The semi-annual meeting is held in different places, alternately, on the first Thursday in December of each year. President, Jason T. Wallace, M.D., Oneida, N. Y. Secretary, Ellis M. Santee, M.D., Cortland, N. Y. Number of members, 72; admitted the past year, 6; died the past year, 0. Annual dues, $1.00.

Monroe County Homœopathic Medical Society. Organized 1866. Incorporated 1872. The annual meeting is held in Rochester, N. Y., on the second Tuesday in December of each year. Quarterly meetings are held in the same place on the second Tuesday of the months of March, June and September of each year. President, W. S. Rambo, M.D., 41 Sophia Street, Rochester, N. Y. Secretary, L. J. Sanders, M.D., 421 Monroe Avenue, Rochester, N. Y. Number of members, 49; admitted the past year, 3; died the past year, 1; failed to qualify the past year, 1. Annual dues, $2.00. "We have been doing a system of provings during the past year, in accordance with the scheme of the O. O. & L. Society of the American Institute and have had four provers at work, with very satisfactory results. Three weeks were given to each prover."

Montgomery County Homœopathic Medical Society. Organized 1881. Incorporated 1889. The annual meeting is held in Fonda, N. Y., on the second Tuesday in January of each year. Quarterly meetings are held at different places in the County, alternately, on the second Tuesdays in April, July and October of each year. President, William Galler, M.D., Fort Plain, N. Y. Secretary, L. A. Frazier, M.D., Amsterdam, N. Y. Number of members, 17; admitted the past year, 2. Annual dues, $1.00. "There were four good papers presented and well discussed by the society during the past year."

Academy of Pathological Science. Organized 1883. Not incorporated. The annual meeting is held in New York City on the fourth Friday in November of each year. Monthly meetings are held in the same place on the fourth Friday in each month from October to May, inclusive. President, Walter Sands Mills, M.D., 324 West Eighty-ninth Street, New York City. Secretary, Nathaniel H. Ives, M.D., Mount Vernon, N. Y. Number of members, 150. Annual dues, $1.00. Delegate, Walter Sands Mills, M.D.

New York Homœopathic Materia Medica Society. Organized 1891. Not incorporated. The annual meeting is held in New York City on the third Wednesday in December of each year. Monthly meetings are held in the same place on the third Wednesday in each month. President, Walter Sands Mills, M.D., 324 West Eighty-ninth Street, New York City. Secretary, Charles Ver Nooy, M.D., 146 West Sixty-fourth Street, New York City. Number of members, 75; admitted the past year, 2; died the past year, 1. Annual dues, $1.00. Delegate, Walter Sands Mills, M.D.

Onondaga County Homœopathic Medical Society. Organized 1863. Incorporated 1864. The annual meeting is held in the Kirk Building, Syracuse, N. Y., in the month of May of each year. Monthly meetings are held in the same place. President, Frederick Hooker, M.D., 117 Kirk Building, Syracuse, N. Y. Secretary, J. Herbert Irish, M.D., 804 East Geoesee Street, Syracuse, N. Y. Number of members, 25; admitted the past year, 1; died the past year, 1. Annual dues, $1.00.

Ontario County Homœopathic Medical Society. Organized 1861. Not incorporated. The annual meeting is held in Canadaigua, N. Y., on the second Wednesday in October of each year. The semi-annual meeting is held in Clifton

Springs, N. Y., on the first Wednesday in June of each year. President, James C. Knapp, M.D., Geneva, N. Y. Secretary, Charles T. Mitchell, M.D., Canandaigua, N. Y. Number of members, 14; admitted the past year, 1. Annual dues, 50 cents.

Oswego County Homœopathic Medical Society. Organized 1861. Not incorporated. The annual meeting is held in Oswego, N. Y., on the second Tuesday in June of each year. The semi-annual meeting is held in different places in the county, alternately, on the second Tuesday in December of each year. We have been unable to obtain any report from this society for the past year. The officers for last year were, President, A. C. Calisch, M.D., Oswego, N. Y. Secretary, Llewellyn B. Richards, M.D., Oswego, N. Y.

Rochester Hahnemannian Society. Organized 1886. Not incorporated. The annual meeting is held in Hahnemann Hospital, Rochester, N. Y., on the third Tuesday in December of each year. Monthly meetings are held in the same place on the third Tuesday in each month. President, A. R. Fritz, M.D., Rochester, N. Y. Secretary, G. Matthew Thompson, M.D., 275 Alexander Street, Rochester, N Y. Number of members, 12. Annual dues, $2.00. Publishes the papers read at the meetings, in the *Medical Advance.*

Southern Tier Homœopathic Medical Association. Organized 1874. Incorporated 1878. The annual meeting is held in Corning, N. Y., on the third Tuesday in January of each year. Quarterly meetings are held in different places, alternately, on the third Tuesdays in the months of April, July and October of each year. President, Mark S. Purdy, M.D., Corning, N. Y. Secretary, Albert H. Rodgers, M.D., Corning, N. Y Number of members, 21; admitted the past year, 1. Annual dues, $1.00. Delegate, Mark S. Purdy, M.D.

Westchester County Homœopathic Medical Society. Organized 1865. Incorporated 1865. The annual meeting is held in Yonkers, N. Y., on the last Wednesday in October of each year. The semi-annual meeting is held in different places in the County, alternately, on the last Wednesday in May of each year. President, Matthew J. Hall, M.D., Mamaroneck, N. Y. Secretary, Horace G. Keith, M.D., 317 South Broadway, Yonkers N. Y. Number of members, 33; admitted the past year, 1; died the past year, 1. Annual dues, $1.00. Delegate, Horace G. Keith, M.D.

Western New York Homœpathic Medical Society. Organized 1885. Not incorporated. The annual meeting is held in Buffalo and Rochester, alternately, on the second Friday in April of each year. Quarterly meetings are held, alternately, in different places in Western New York, on the second Fridays in July, October and January of each year. President, Daniel H. Arthur, M.D., State Hospital, Gowanda, N. Y. Secretary, W. W. Winans, M.D., 33 South Clinton Street, Rochester, N. Y. Number of members, 160; admitted the past year, 5; died the past year, 2. Annual dues, $1.00.

OHIO

Cincinnati Homœopathic Lyceum. Organized 1889. Not incorporated. The annual meeting is held in Pulte Medical College Building, Cincinnati, Ohio, on the second Wednesday in April of each year. Monthly meetings are held in the same place on the second Wednesday in each month, from October to April, inclusive. President, Charles A. Pauly, M.D., Union Trust Building, Cincinnati, Ohio. Secretary, Mary E. Miner, M.D., 22 East Fifth Street, Cincinnati, Ohio. Number of members 66. Annual dues, $1.00. "During the last year the meetings have been well attended and much interest has been manifested."

Cleveland Homœopathic Medical Society. Organized 1890. Incorporated 1890. The annual meeting is held in Cleveland, Ohio, on the third Wednesday in February of each year. Monthly meetings are held in the same place on the third Wednesday in each month. President, William T. Miller, M.D., 260 Euclid Avenue, Cleveland, Ohio. Secretary, J. Richey Horner, M.D., 275 Prospect Street, Cleveland, Ohio. Number of members, 122; admitted the past year, 13; died the past year, 1. Annual dues, $1.00. Publishes its "Transactions" in its official organ, The Cleveland Medical and Surgical Reporter. Delegates, William T. Miller, M.D., J. Richey Horner, M.D.

Columbus Homœopathic Medical Society. Organized 1897. Not incorporated. The annual meeting is held in Columbus, Ohio, on the first Monday in October of each year. Monthly meetings are held in the same place on the first Monday

in each month. We have been unable to obtain any report from this society for the past year. The officers for last year were: President, R. O. Keiser, M.D., 54 North Washington Avenue, Columbus, Ohio. Secretary, A. B. Castle, M.D., 1006 North High Street, Columbus, Ohio.

Dayton Homœopathic Medical Society. Organized 1894. Not incorporated. The annual meeting is held usually at the "Phillips House," Dayton, Ohio, on the first Monday in September of each year. Semi-monthly meetings are held at the residences of the members, in alphabetical order, on the first and third Mondays in each month. President, W. J. Blackburn, M.D., 1111 Wayne Avenue, Dayton, Ohio. Secretary, H. J. Guy, M.D., 2610 East Third Street, Dayton, Ohio. Number of members, 25; admitted the past year, 2; died the past year, 1. Annual dues, $3.00. Delegates, Frank Webster, M.D., H. E. Palmer, M.D. "This is the best attended medical society in the State."

Homœopathic Medical Society of Eastern Ohio. Organized 1869. Not incorporated. The annual meeting is held in Akron, Ohio, on the third Wednesday in October of each year. The semi-annual meeting is usually held at Cleveland and Canton, alternately, on the third Wednesday in April of each year. President, Edwin J. Cauffield, M.D., Akron, Ohio. Secretary, George B. Haggart, M.D., Alliance, Ohio. Number of members, 200; admitted the past year, 25; died the past year, 5. Publishes its Transactions in the Cleveland Medical and Surgical Recorder. Delegate, Edward H. Jewett, M.D. "This has been one of the most prosperous years that the society has ever had. The attendance has always been from 50 to 200. Good work has been done. We are not in favor of any assimilation by any school, as we are doing too well ourselves."

Miami Valley Homœopathic Medical Society. Organized 1860. Incorporated 1870. The annual meeting is held in Dayton, Ohio, on the last Thursday in October of each year. The semi-annual meeting is held in different places, alternately, on the last Thursday in April of each year. President, Charles O. Munns, M.D., Oxford, Ohio. Secretary, W. Webster Ensey, M.D., 405 East Brown Street, Dayton, Ohio. Number of members, 132; admitted the past year, 4; died the past year, 1. Publishes the papers read at the meetings in the medical journals. Delegates, Henry E. Beebe, M.D., and Laura C. Brickley, M.D. "The interest and the attendance at the meetings are increasing."

Northwestern Ohio Homœopathic Medical Society. Organized 1893. Incorporated 1893. The annual meeting is usually held in Toledo, Ohio, on the second Tuesday in December of each year. The semi-annual meeting, an informal one for the election of officers, is held in Toledo, Ohio, on the second Tuesday in June of each year. President, Edward M. Goodwin, M.D., Toledo, Ohio. Secretary, William A. Humphreys, M.D., 2235 Maplewood Avenue, Toledo, Ohio. Number of members, 75; admitted the past year, 5. Annual dues, $1.00.

Ohio Valley Homœopathic Medical Society. Organized 1901. Not incorporated. The annual meeting is held in different places, alternately. Quarterly meetings are held in different places, alternately. President, S. C. Shane, M.D., Steubenville, Ohio. Secretary, William N. Rogers, M.D., 1923 Belmont Street, Bellaire, Ohio. Number of members, 19; admitted the past year, 7. Annual dues, $1.00. Delegate, S. C. Shane, M.D.

Summit County Clinical Society. Organized 1885. Not incorporated. The annual meeting is held in Akron, Ohio, on the first Tuesday in January of each year. Monthly meetings are held at the office of B. D. Childs, M.D., Akron, Ohio, on the first Tuesday of each month. President, William Wilson, M.D., 17 South Broadway, Akron, Ohio. Secretary, Katherine Kurt, M.D., 17 South Broadway, Akron, Ohio. Number of members, 16. Publishes its Transactions in the Cleveland Medical and Surgical Reporter. "Topics are selected, with one member chosen to lead in discussion. We always report clinical cases, of which a record is kept in the minutes. Our society is clinical first of all. The following subjects have been chosen for the regular monthly meetings of this year: February, 'Varricela' and 'Variola.' Leader, Edwin J. Cauffield, M.D. March, 'Catarrhal Conditions of Respiratory Passages.' Leader, R. B. Carter, M.D. April, 'Eczema.' Leader, K. W. Cory, M. D. May, 'Electric Therapeutics.' Leader, F. B. Livermore, M.D. June, 'Tuberculosis.' Leader, William Wilson, M.D. July, 'Sunstroke.' Leader, W. A. Mansfield, M.D."

PENNSYLVANIA

Allegheny County Homœopathic Medical Society. Organized 1864. Not incorporated. The annual meeting is held in the Homœopathic Hospital, Pittsburg, Pa., on the second Wednesday in December of each year. Monthly meetings are held in the same place on the second Wednesday in each month. We have been unable to obtain any report from this society for the past year. The officers for the last year were, President, James H. McClelland, M.D., Fifth and Wilkins avenues, Pittsburg, Pa. Secretary, H. S. Nicholson, M.D., 621 Arch Street, Allegheny, Pa.

Beaver County Homœopathic Medical Society. Organized 1883. Not incorporated. The annual meeting is held in Beaver. Monthly meetings are held in the same place. President, E. S. H. McCauley, M.D., Beaver, Pa. Secretary, William Raymer, M.D., Beaver Falls, Pa. Number of members, 14; admitted the past year, 2; died the past year, 1. Annual dues, $1.00.

Erie County Homœopathic Medical Society. Organized 1891. Not incorporated. The annual meeting is held in Erie, Pa., on the first Wednesday in January of each year. Quarterly meetings are held in the same place on the first Wednesdays in April, July and October of each year. We have been unable to obtain any report from this society for the past year. The officers for the last year were, President, Joseph Phillips, M.D., 15 East Eighth Street, Erie, Pa. Secretary, Richard T. Marks, M.D., 252 West Eighteenth Street, Erie, Pa.

Goodno Homœopathic Medical Society. Organized 1899. Not incorporated. The annual meeting is held in Lancaster, Pa., on the second Friday in October of each year. Quarterly meetings are held in Harrisburg, York and Columbia, alternately, on the second Fridays in January, April and July of each year. President, W. G. Taylor, M.D., Columbia, Pa. Secretary, E. T. Prizer, M.D., Lancaster, Pa. Number of members, 30; admitted the past year, 3; died the past year, 1. Annual dues, $1.00.

Homœopathic Medical Society of Chester, Delaware, and Montgomery Counties. Organized 1858. Not incorporated. The annual meeting is usually held in Philadelphia, Pa., on the second Tuesday in October of each year. Bi-monthly meetings are held in different places, alternately, on the second Tuesdays in December, February, April, June and August of each year. The December and February meetings are usually held in Philadelphia, the April meetings in Chester, and the June and August meetings in other places. President H. E. Williams, M.D., Coatesville, Pa. Secretary, Isaac Crowther, M.D., 700 Madison Street, Chester, Pa. Number of members, 61; admitted the past year, 3; died the past year, 1. Annual dues, $1.00. Publishes the transactions in the medical journals. The average attendance at the meetings for the year has been 29. Delegates, Daniel P. Madduxl, M.D., J. W. Phatt, M.D.

Homœopathic Medical Society of Delaware County. Organized 1898. Not incorporated. The annual meeting is held in different places in the county, alternately, on the second Thursday in May of each year. Bi-monthly meetings are held in different places, alternately on the second Thursdays in July, September, November, January and March of each year. President, Isaac Crowther, M.D., 700 Madison Street, Chester, Pa. Secretary, George C. Webster, M.D., 311 West Seventh Street, Chester, Pa. Number of members, 21; admitted the past year, 1. Annual dues, $1.00. Delegate, Isaac Crowther, M.D. Has published one paper, by Charles Hubbard, M.D., "Uses and Abuses of the Nose."

Homœopathic Medical Society of Germantown. Organized 1877. Not incorporated. The annual meeting is held in Germantown, Philadelphia, Pa., in January of each year. Monthly meetings are held in the same place. We have been unable to obtain any report from this society for the past year. At the last report the officers were, President, Louis Plummer Posey, M.D., 1429 Walnut Street, Philadelphia, Pa. Secretary, James Harwood Closson, M.D., 53 West Chelten Avenue, Germantown, Philadelphia, Pa.

Lackawanna County Homœopathic Medical Society. Organized 1900. Not incorporated. Monthly meetings are held in Scranton, Pa. President, F. W. Lange, M.D., 240 Adams Avenue, Scranton, Pa. Secretary, J. Lyman Peck, M.D., 232 Washington Avenue, Scranton, Pa. Number of members, 20; died the past year, 1. "The society was never in a more prosperous condition than it is at the present time."

Lehigh Valley Homœopathic Medical Society. Organized 1881. Not incorporated. The annual meeting is held either in Easton, Pa., or in Allentown, Pa., on the first Thursday in February of each year. Bi-monthly meetings are held in different places in the Lehigh Valley, alternately, on the first Thursdays in April, June, August, October and December of each year. President, Egbert D. Doolittle, M.D., Easton, Pa. Secretary, Albert J. Bittner, M.D., Allentown, Pa. Number of members, 25. Annual dues, $1.00.

Luzerne County Homœopathic Medical Society. Organized 1899. Not incorporated. The annual meeting is held at Harvey's Lake, Luzerne Co., Pa., on the fourth Friday in June of each year. Semi-monthly meetings are held at different places in the county, on the second and fourth Fridays in each month. President, Sarah J. Coe, M.D., Wilkesbarre, Pa. Secretary, Frank A. Whiteman, M.D., 233 South Franklin Street, Wilkesbarre, Pa. Number of member, 13. Delegate, J. Arthur Bullard, M.D.

Homœopathic Medical Society of Northern Pennsylvania. Organized 1880. Incorporated 1881. The annual meeting is held in Scranton and Wilkesbarre, alternately, on the third Thursday in June of each year. Bi-monthly meetings are held in these two cities, alternately, on the third Thursdays in August, October, December, February and April of each year. President, J. Lyman Peck, M.D., 332 North Washington Avenue, Scranton, Pa. Secretary, Anna C. Clarke, M.D., 426 Adams Avenue, Scranton, Pa. Number of members, 34; admitted the past year, 2. Annual dues, $2.00.

Homœopathic Medical Society of Philadelphia. Organized 1886. Not incorporated. The annual meeting is held in Philadelphia, Pa., on the second Thursday in June of each year. Monthly meetings are held in the same place on the second Thursday in each month. We have been unable to obtain any report from this society for the past year. The officers for last year were, President, James Harwood Closson, M.D., 53 North Chelten Avenue, Germantown, Philadelphia, Pa. Secretary, Herbert P. Liepold, M.D., 310 North Chelten Avenue, Germantown, Philadelphia, Pa.

Homœopathic Medical Society of Twenty-third Ward of Philadelphia. Organized 1881. Not incorporated. The annual meeting is held in Philadelphia, Pa., on the third Wednesday in October of each year. Monthly meetings are held in the same place on the third Wednesday in each month. President, Frank E. Yerkes, M.D., Ambler, Pa. Secretary, John D. Boileau, M.D., 804 Lehigh Avenue, Philadelphia, Pa. Number of members, 30; admitted the past year, 2; died the past year, 1. Annual dues, $1.00. Delegates, John D. Boileau, M.D., Richard C. Allen, M. D.

Philadelphia Medical and Surgical Society. Organized 1899. Not incorporated. The annual meeting is held in Professional Building, Philadelphia, Pa., on the third Wednesday in January of each year. Monthly meetings are held in the same place on the third Wednesday in each month. President, Leon T. Ashcraft, M.D., Professional Building, Philadelphia, Pa. Secretary, William C. Hunsicker, M.D., 2111 North Twenty-ninth Street, Philadelphia, Pa. Number of members, 22; admitted the past year, 2. Delegate, Oliver S. Haines, M.D.

Womans' Homœopathic Medical Society of Pittsburg. Organized 1899. Not incorporated. Monthly meetings are held in Pittsburg, Pa., at the offices of the members, alternately. President, Millie J. Chapman, M.D., 321 Smith Block, Sixth Street, Pittsburg, Pa. Secretary, Ella D. Goff, M.D., 10 West Diamond Street, Allegheny, Pa. Number of members, 9; admitted the past year, 2. Annual dues, $1.00. Delegate, Millie J. Chapman, M.D.

Homœopathic Practitioners' Association of Reading. Organized 1896. Not incorporated. The annual meeting is held in Reading, Pa., on the first Tuesday in January of each year. Monthly meetings are held in the same place on the first Tuesday in each month. President, M. Margaret Hassler Schantz, M.D., 402 North Fifth Street, Reading, Pa. Secretary, Frederick E. Howell, M.D., 307 North Fifth Street, Reading, Pa. Number of members, 12; died the past year, 1. Delegate, M. Margaret Hassler Schantz, M.D.

Reading Homœopathic Hospital and Dispensary Association. Organized 1887. Not incorporated. The annual meeting is held in the Homœopathic Hospital, Reading, Pa., on the third Tuesday in January of each year. Monthly meetings are held in the same place on the fourth Tuesday in each month. President, D. C. Kline, M. D., 201 South Fifth Street, Reading, Pa. Secretary, Henry

F. Schantz, M.D., 402 North Fifth Street, Reading, Pa. Number of members, 12. Annual dues, $1.00. Delegate, D. C. Kline, M.D.

Schuylkill County Homœopathic Medical Society. Organized 1883. Not incorporated. The annual meeting is held in different places in the county, alternately, on the last Thursday in January of each year. Quarterly meetings are held in different places in the county, alternately, on the last Thursday in April, July and October of each month. President William F. Doyle, M.D., Market Street, Pottsville, Pa. Secretary, Thomas W. Swalm, M.D., 205 Wahantorego Street, Pottsville, Pa. Number of members, 24; admitted the past year, 1. Annual dues, $1.00.

WASHINGTON

Spokane Homœopathic Hospital Society. Organized 1889. Not incorporated. The annual meeting is held in Spokane, Wash., on the first Monday in May of each year. Other meetings are held at the call of the President. President, C. S. Penfield, M.D., Spokane, Wash. Secretary, Charles E. Grove, M.D., Hyde Block, Spokane, Wash. Number of members, 10. Annual dues, $2.00. Delegates, Charles E. Grove, M.D., E. D. Olmsted, M.D.

WISCONSIN

Milwaukee Academy of Medicine. Organized 1897. Not incorporated. The annual meeting is held in Milwaukee, Wis., on the third Wednesday in April of each year. Monthly meetings are held in the same place on the third Wednesday in each month from September to April, inclusive. President, W. W. Irving, M.D., 121 Wisconsin Street, Milwaukee, Wis. Secretary, Filip A. Forsbeck, M.D., 121 Wisconsin Street, Milwaukee, Wis. Number of members, 20. Annual dues, $1.00.

MEDICAL CLUBS

COLORADO

Denver Homœopathic Club. Organized 1890. Not incorporated. The annual meeting is held at Hotel Adams, Denver, Colo., on the third Monday in January of each year. Monthly meetings are held in the same place on the third Monday in each month. President, Walter Joel King, M.D., Golden, Col. Secretary, Giles P. Howard, M. D., Steele Block, Denver, Col. Number of members, 51; admitted the past year, 6. Annual dues, $1.00. Publishes its Transactions in "The Critique." Delegates, Chauncey E. Tennant, M.D., J. P. Willard, M.D. The following is the program for the year: April, "Felon," Walter Joel King, M.D. May, "Tuberculosis," F. K. Dabney, M.D.; "Mastoiditis," G. S. Peck, M.D.; "Bronco-pneumonia," G. P. Howard, M.D. June, "The Philosophy of Homœopathy," W A. Burr, M.D.; "Diphtheria," E. J. Clark, M.D.; "Septic Intoxication," with report of case, J. B. Brown, M.D. July, "Recent Developments in Examination of Blood," F. Abbott, M.D.; "Differential Diagnosis of Abdominal Affections," H. M. Fryer, M.D.; "Mercurius Biniodide," W. A. Jones,, M.D. August, "Echinacea in Septic Conditions," J. W. Mastin, M.D.; "The Mercuries vs. Syphilis in Diseases of the Myelon and General Nervous System," A. C. Stewart, M.D.; "Surgery of the Intestines," W. R. Welch, M.D.; September, "Peritoneal Tuberculosis," J. W. Harris, M.D.; "Chronic Constipation and Treatment," W. F. Burg, M.D.; "Uricacidaemia," E. Dilliard, M.D. October, "Calendula," S. S. Smythe, M.D.; "Inflammatory Rheumatism," S. E. Calvert, M.D.; "Spinal Meningitis," C. W. Enos, M.D. November, "Dietetics," C. E. Tennant, M.D.; "Different Diagnosis of the Exanthemata," A. M. Moore, M.D.; "Marasmus;" E. M. Griffith, M.D. December, "A Few Homœopathic Remedies with Definite Indications in Eye and Ear Diseases," D. A. Strickler, M.D.; "Fracture of the Maxillæ," R. P. McGee, M.D. February, "A Twenty-Minute Study of Phosphorous," J. P. Willard, M.D.; "Neurasthenia," E. F. A. Drake, M.D.; "Eczema," O. S. Vinland, M.D. March, "Use of the Nosodes," E. J. Clarke, M.D.; "Suppression of Symptoms," Clinton Enos, M.D.; "The Surgical Remedies," R. D. P. Brown, M.D.

CONNECTICUT

Dunham Medical Club of Hartford. Organized 1897. Not incorporated. The annual meeting is held in Hartford, Conn. Monthly meetings are held in

the same place. The President is chosen at each meeting. Secretary, Hills Cole, 926 Main Street, Hartford, Conn. Numbers of members, 16. "This is a purely informal organization, holding monthly meetings for the discussion of medical and scientific papers."

DISTRICT OF COLUMBIA

The Diagnostic Club of Washington. Organized 1902. Not incorporated. Monthly meetings are held in Washington at the residences of the members, alternately. The meeting is presided over by the host of the evening. No regular Secretary. Number of members, 12; died the past year, 1. Delegate, Henry Krogstad, M.D.

Washington Medical and Surgical Club. Organized 1892. Not incorporated. The annual meeting is held in Washington, D. C., on the third Thursday in December of each year. Monthly meetings are held in the same place on the third Thursday of each month. President, Samuel S. Stearns, M.D., 1425 Rhode Island Avenue, N. W., Washington, D. C. Secretary, Charles A. Davis, M.D., 1010 Fifteenth Street, N. W., Washington, D. C. Number of members, 10; admitted the past year, 1. Delegate, Charles A. Davis, M.D.

GEORGIA

Atlanta Medical Club. Organized 1882. Not incorporated. The annual meeting is held in Atlanta, Ga., on the first Monday in June of each year. Monthly meetings are held in the same place on the first Monday in each month. President, Richard E. Hinman, M.D., 153 Whitehall Street, Atlanta, Ga. Secretary, Clarence M. Paine, M.D., 67 North Forsyth Street, Atlanta, Ga.

IOWA

Western Hahnemann Club. Secretary, Alfred P. Hanchett,, M.D., 120 Fourth Street, Council Bluffs, Iowa. We have been unable to obtain any report from this society for the past year.

MARYLAND

Homœopathic Medical and Surgical Club of Baltimore. Organized 1901. Not incorporated. The annual meeting is held in Baltimore, Md., on the second Wednesday in December of each year. Monthly meetings are held in the same place on the second Wednesday in each month. President, Charls Leslie Rumsey, M.D., 812 Park Avenue, Baltimore, Md. Secretary, William M. Pannebaker, M.D., 1209 Madison Avenue, Baltimore, Md. Number of members, 12; admitted the past year, 2; died the past year, 1. Annual dues, $3.00. Delegate, Charles L. Rumsey, M.D.

MASSACHUSETTS

Hughes Medical Club of Boston. Organized 1879. Not incorporated. Annual meeting is held in Boston, Mass., on the second Friday in May of each year. Monthly meetings are held in the same place on the second Friday in each month from October to May, inclusive. The President is chosen at each meeting. Secretary, George B. Rice, M.D., 220 Clarendon Street, Boston, Mass. Number of members, 16. "The meetings are perfectly informal; usually a paper on some scientific subject is read and discussed. No other original work other than this has been done this year."

Neighborhood Medical Club of Boston. Organized 1897. Not incorporated. The annual meeting is held at the Hotel Nottingham, Boston, Mass., on the second Wednesday evening in April of each year. Monthly meetings are held in different hotels in Boston, alternately, on the second Wednesday evening in each month from October to May, inclusive. The president is chosen at each meeting. Secretary J. Tucker Cutler, M.D., 20 Crawford Street, Roxbury, Mass. Number of members, 30; admitted the past year, 2. Annual dues, $20.00. "The usual order of exercises is a 6 o'clock dinner, followed by the presentation and discussion of medical and surgical papers."

Lowell Hahnemann Club. Organized 1881. Not incorporated. The annual meeting is held in Lowell, Mass., on the first Wednesday in December of each year. Bi-monthly meetings are held in the same place on the first Wednesdays in the months of October, December, February, April and June of each year. President, George L. Van Deursen, M.D., 17 Kirk Street, Lowell, Mass. Secre-

tary, Edward B. Holt, M.D., 18 Shattuck Street, Lowell, Mass. Number of members, 7 active and 9 associate; admitted the past year, 1 associate; died the past year, 1. Annual dues, Active, $2.00; Associate, $1.00. "Active membership is confined to the residents of Lowell; Associates are non-residents." Delegate, George L. Van Deursen, M.D.

Farrington Club of Salem. Organized 1897. Not incorporated. The annual meeting is held in Salem, Mass., on the first Thursday in September of each year. Weekly meetings are held in the same place on every Thursday evening during the year. We have been unable to obtain any report from this society for the past year.

Allen Homœopathic Materia Medica Club of Springfield. Organized 1899. Not incorporated. The annual meeting is held in Springfield, Mass. Monthly meetings are held in the same place. We have been unable to obtain any report from this society for the past year.The officers for the last year were: President, John H. Carmichael, M.D., Maple Street, Springfield, Mass. Secretary, Clarice J. Parsons, M.D., St. James Avenue, Springfield, Mass.

MICHIGAN

Detroit Homœopathic Medical Club. We have been unable to obtain any report from this society for the past year.

MINNESOTA

Douglass County Medical Club. We have been unable to obtain any report from this society for the past year.

MISSOURI

Hahnemann Medical Club of St. Louis. Organized 1873. Not incorporated. The annual meeting is held in St. Louis, Mo., in January of each year. Semi-monthly meetings are held at the residences of members, alternately. The President is elected at each meeting. Secretary, James A. Campbell, M.D., 207 Mermod-Jaccard Building, St. Louis, Mo. Number of members, 10; admitted the past year, 1. Delegate, Charles H. Goodman, M.D.

NEW JERSEY

Atlantic City Homœopathic Medical Club. Organized 1889. Not incorporated. The annual meeting is held in Atlantic City, N. J., on the third Friday in January of each year. Monthly meetings are held in the same place on the third Friday in each month, with the exception of July and August. President, Walter C. Sooy, M.D., 1921 Pacific Avenue, Atlantic City, N. J. Secretary, J. William Hughes, M.D., 726 Atlantic City, N. J. Number of members, 16; died the past year, 1. Annual dues, $2.00. Publishes the papers which are read by the members at the meetings.

Communipaw Medical Club. Organized 1885. Not incorporated. Monthly meetings are held in Jersey City, N. J. President, Eugene H. Porter, M.D., 181 West Seventy-third Street, New York, N. Y. Secretary, Levings A. Opdyke, M.D., 55 Clinton Avenue, Jersey City, N. J. Number of members, 3.

Machaon Club of Jersey City. Organized 1893. Not incorporated. The annual meeting is held in Jersey City, N. J., on the first Wednesday in February of each year. Monthly meetings are held in the same place on the first Wednesday in each month. President, C. F. Snyder, M.D., Summit Avenue, Jersey City, N. J. Secretary Bernard Clausen, M.D., 736 Garden Street, Hoboken, N. J. Number of members, 15; admitted the past year, 3; died the past year,1. Annual dues, $1.00.

New Jersey Chiron Club. Organized 1894. Not incorporated. The annual meeting is held in Newark, N. J., on the second Thursday in November of each year. Monthly meetings are held in the same place on the second Thursday of each month, from October to June, inclusive. The President is chosen at each meeting. Secretary, Edward Hill Baldwin, M.D., 77 Clinton Avenue, Newark, N. J. Number of members, 15; admitted the past year, 1. Annual dues, $13.50.

New Jersey Medical Club. Organized 1869. Not incorporated. The annual meeting is held in Hotel Manhattan, New York City, on the third Wednesday in March of each year. Monthly meetings are held in the same

place, on the third Wednesdays in each month, from October to June, inclusive. President, Levings A. Opdyke, M.D., 55 Clinton Avenue, Jersey City, N. J. Secretary, Charles B. Holmes, M.D., Rahway, N. J. Number of members, 15; admitted the past year, 1; died the past year, 1. Delegate, Levings A. Opdyke, M.D.

NEW YORK

Inter Nos Club of Brooklyn. Organized 1901. Not incorporated. The annual meeting is held at the Crescent Club, Brooklyn, N. Y., on the second Friday in October of each year. Monthly meetings are held in the same place on the second Friday of each month from October to May, inclusive. Executive Officer, E. Rodney Fiske, M.D., 1140 Dean Street, Brooklyn, N. Y. Secretary, Ralph I. Lloyd, M.D., 450 Ninth Street, Brooklyn, N. Y. Number of members, 20; admitted the past year, 2. Annual dues, $10.00.

Brooklyn Medical Club. Organized 1898. Not incorporated. The annual meeting is usually held at the Montauk Club House, Brooklyn, N. Y., on the third Monday in October of each year. Monthly meetings are held at the same place on the third Monday in each month from October to May, inclusive. The President is chosen at each meeting. Secretary, Walter S. Rink, M.D., 168 McDonough Street, Brooklyn, N. Y. Number of members, 14. Annual dues, $16.00.

Clinical Club of Buffalo. Organized 1895. Not incorporated. The annual meeting is held in Buffalo in the month of April of each year. Semi-monthly meetings are held in June, August, October, December and February of each year. The President is chosen at each meeting. Secretary, Clayton W. Beaman, M.D., 232 Hoyt Street, Buffalo, N. Y. Number of members, 30. Annual dues, 50 cents. "One paper is read at each meeting upon some general medical topic, which is followed by a discussion. 'Differential Diagnosis,' 'Materia Medica and Therapeutics' and 'The Organon' have been some of the topics of discussion, besides the papers read."

Bayard Medical Club, New York. Organized 1903. Not incorporated. President, Clarence Howard, M.D., 57 West Fifty-first Street, New York City. Secretary, Spencer Carleton, M.D., 71 West Fiftieth Street, New York City.

Chiron Club of New York. Organized 1886. Not incorporated. The annual meeting is held in New York City on the second Monday in December of each year. Monthly meetings are held in the same place on the second Monday in each month. President E. Rodney Fiske, M.D., 1140 Dean Street, Brooklyn, N. Y. Secretary, Henry B. Minton, M.D., 165 Joralemon Street, 1140 Dean Street, Brooklyn, N. Y. Number of members 17; died the past year 1. Annual dues, $1.00.

Clinical Club of New York. Organized 1877. Not incorporated. The annual meeting is held at "The Arena," New York City, on the third Friday in November of each year. Monthly meetings are held in the same place on the third Friday of each month from October to May, inclusive. President, Homer I. Ostrom, M.D., 42 West Forty-eighth Street, New York City. Secretary Gove S. Harrington, M.D., 487 West One Hundred and Forty-fifth Street. New York City. Number of members, 28; admitted the past year, 4. Annual dues, $12.00. Delegates, T. Franklin Smith, M.D., George W. McDowell, M.D.

Dunham Club of New York. Organized 1895. Not incorporated. The annual meeting is held in New York City on the third Saturday in January of each year. Monthly meetings are held in the same place on the third Saturday of each month, from October to June inclusive. President, E. Rodney Fiske, M.D., 1140 Dean Street, Brooklyn, N. Y. Secretary, Charles Gennerich, M.D., 181 East Sixty-fourth Street New York City. Number of members 15; admitted the past year, 3.

Helmuth Club of New York. Organized 1902. The annual meeting is held in New York City on the first Monday in May of each year. Monthly meetings are held in the same place on the first Monday in each month, from September to May, inclusive. President, Robert Mortimer Jones, M.D., 130 West Forty-eighth Street, New York City. Secretary, Frank Wilbur Cornwell, M.D., 700 West End Avenue, New York City. Number of members, 25. "The objects of this club are scientific and social. A paper is read and discussed at each meeting."

Jahr Club of New York. Organized 1876. Not incorporated. The annual meeting is held in New York City on the first Monday in November of each year. Monthly meetings are held in the same place on the first Monday in each month. President, George M. Dillow, M.D., 223 West Fifty-seventh Street, New York City. Secretary, John E. Wilson, M.D., 23 East Forty-fifth Street, New York City. Number of members, 12; admitted the past year, 1.

Meissen Club of New York. Organized 1900. Not incorporated. The annual meeting is held in New York City on the third Friday in June of each year. Monthly meetings are held in the same place on the third Friday in each month, from September to June, inclusive. President, Edward G. Tuttle, M.D., 61 West Fifty-first Street, New York City. Secretary, Theodore H. Lemmerz, M.D., 143 Magnolia Avenue, Jersey City, N. J. Number of members, 23 Active and 5 Associate; admitted the past year, 2; died the past year, 1. Annual dues, $1.00. Delegate, Edward G. Tuttle, M.D.

New York Medical Club. Organized 1865. Not incorporated. The annual meeting is held in New York City. Monthly meetings are held in the same place. President elected at each meeting. Secretary, Willard Ide Pierce, M.D., 64 West One Hundred and Twenty-sixth Street, New York City. Number of members, 24; limited to that number; admitted the past year, 2; died the past year, 3. No regular dues. "This is the oldest Homœopathic Club in New York."

New York Homœopathic Union. Organized 1888. Not incorporated. The annual meeting is held in New York City on the third Thursday in April of each year. Monthly Meetings are held in the same place on the third Thursday of each month. President, Edmund Carleton, M.D., 71 West Fiftieth Street. New York City. Number of members, 40.

Unanimous Club of New York. Organized 1893. Not incorporated. The annual meeting is held in New York City on the last Wednesday in May of each year. Quarterly meetings are held in the same place on the last Wednesdays in the months of October, January and March of each year. The President is chosen at each meeting. Secretary, Alton G. Warner, M.D., 19 Schermerhorn Street, Brooklyn, N. Y. Number of members, 20; admitted the past year, 2. Annual dues, $20.00. Delegate, Alton G. Warner, M.D.

OHIO

Pulte Materia Medica Club of Cincinnati. Organized 1900. Not incorporated. The annual meeting is held in Cincinnati, Ohio, on the first Friday in May of each year. Semi-monthly meetings are held in the same place on the first and third Fridays of each month. President, Sophia E. Georgia, M.D., 1634 Pullman Avenue, Cincinnati, Ohio. Secretary, Ella E. Huntington, M.D., 630 West Eighth Street, Cincinnati, Ohio. Number of members, 10.

Toledo Homœopathic Club. Organized 1902. Not incorporated. The annual meeting is held in Toledo, Ohio. Semi-monthly meetings are held at "St. Charles" hotel, Toledo, Ohio. President, John Howard McVay, M.D., 225 Michigan Street, Toledo, Ohio. Secretary, Arthur C. Roll, M.D., National Union Building, Toledo, Ohio. Number of members, 35.

PENNSYLVANIA

Organon Club of Chester. Organized 1887. Not incorporated. The annual meeting is held in Chester, Pa., in February of each year. Semi-monthly meetings are held in the same place. President, Robert P. Mercer, M.D., 223 West Third Street, Chester, Pa. Secretary, Daniel P. Maddux, M.D., Eighth and Madison Streets. Chester, Pa. Number of members, 14. Delegate, Charles W. Perkins, M.D.

Raue Medical Club. Organized 1900. Not incorporated. The annual meeting is held in different places in Central Pennsylvania, alternately, on the first Tuesday in December of each year. Monthly meetings are held at the residences of the members, alternately, on the first Tuesday in each month. President, William J. Sharbaugh, M.D., 1311 Twelfth Avenue, Altoona, Pa. Secretary, Daniel Bohn, M.D., 1021 Seventh Avenue, Altoona, Pa. Number of members, 16; admitted the past year, 3. Annual dues, $1.00. Delegates, J. W. Stitzel, M.D., Edward H. Morrow, M.D.

Boenninghausen Club of Philadelphia. Organized 1877. Not incorporated. The annual meeting is held in Philadelphia on the second Wednesday in November of each year. Monthly meetings are held on the third Wednesday in each month at the office of the Secretary. President, Theodore P. Gitten, M.D., 1716 Diamond Street, Philadelphia, Pa. Secretary, George W. Smith, M.D., 806 North Broad Street, Philadelphia, Pa. Number of members, 9. Annual dues, $2.00.

The J. Harwood Closson Medical Club. Organized 1898. Not incorporated. The annual meeting is held in Hotel Laramie, Philadelphia, Pa. Monthly meetings are held at the offices of the members, alternately, in Germantown, Pa. President, Gilbert J. Palen, M.D., 53 West Walnut Lane, Germantown, Philadelphia, Pa. Secretary, Francis L. Hughes, M.D., 1509 North Sixth Street, Philadelphia, Pa. Number of members, 12. Delegate, J. Harwood Closson, M.D.

Hahnemann Club of Philadelphia. Organized 1872. Not incorporated. The annual meeting is held in Philadelphia, Pa., on the second Tuesday in January of each year. Monthly meetings are held in the same place on the second Tuesday in each month. President, Thomas S. Dunning, M.D., 1328 North Fifteenth Street, Philadelphia, Pa. Secretary, Oliver S. Haines, M.D., 137 North Fifteenth Street, Philadelphia, Pa. Number of members, 9; died the past year, 1. Delegate, John E. James, M.D. "Many very valuable papers were read before the society at its meetings, but none were published during the past year."

Oxford Medical Club of Philadelphia. Organized 1885. Not incorporated. The annual meeting is held in Philadelphia, Pa., on the first Friday in January of each year. Monthly meetings are held in the same place on the first Friday of each month, with the exception of July and August. President, William D. Bayley, M.D., 1438 Poplar Street, Philadelphia, Pa. Secretary, Clarence W. Simmons, M.D., 1628 North Eighteenth Street, Philadelphia, Pa. Number of members, 17; died the past year 1. Annual dues, $2.00. Delegate, T. L. Chase, M.D.

Philadelphia Clinical Society. Organized 1880. Not incorporated. The annual meeting is held in Philadelphia, Pa., in October of each year. Monthly meetings are held in the same place. President, Charles M. Thomas, M.D., 1623 Arch Street, Philadelphia, Pa. Secretary, William H. Bigler, M.D., 118 North Seventeenth Street, Philadelphia, Pa. Number of members, 9. Delegate, Charles M. Thomas, M.D.

Philadelphia Medical Club. Organized 1882. Not incorporated. The annual meeting is held in Philadelphia, at the residence of one of its members, on the first Wednesday in January of each year. Monthly meetings are held on the first Wednesday of each month, with the exception of July, August and September, at the residence of the members, in alphabetical order. President, P. Sherpless Hall, M.D., 1604 Arch Street, Philadelphia, Pa. Secretary, Edwin H. Van Deusen, M.D., 2032 Tioga Street, Philadelphia, Pa. Number of members, 11; died the past year, 2. No dues, Publishes the papers which are read at the meetings, in the medical journals. Delegates, Clarence Bartlett, M.D., William W. Van Baun, M.D.

A. R. Thomas Club of Philadelphia. Organized 1888. Not incorporated. The annual meeting is held in Philadelphia, Pa., on the first Wednesday in January of each year. Monthly meetings are held in the same place on the first Wednesday in each month. President, Halton I. Jesup, M.D., 1839 Arch Street, Philadelphia, Pa. Secretary, Albert A. Norris, M.D., 4818 Chester Avenue, Philadelphia, Pa. Number of members, 21.

Saturday Night Club of Microscopists of Philadelphia. Organized 1894. Not incorporated. The annual meeting is held in Hahnemann Medical College, Philadelphia, Pa., on the third Saturday evening of January of each year. Monthly meetings are held in the same place on the third Saturday evening of each month from October to June, inclusive. President, Joseph C. Guernsey, M.D., 1923 Chestnut Street, Philadelphia, Pa. Secretary, Robert J. McNeill, M.D., 6043 Germantown Avenue, Germantown, Philadelphia, Pa. Number of members, 69; admitted the past year, 10. Annual dues, $2.00. Publishes its transactions in the Hahnemannian Monthly. "The following work has been done by the club during the past year:

"Demonstration of Wright's Blood Stain".....S. W. Sappington, M.D.
"Intestinal Neoplasms with special reference to Carcinoma" Microscopic Slides.....D. Roman, M.D.

"Atelectasis" Microscopic Slides.....A. Korndoerfer, Br.
"Multiple Neuritis, following Puerperal Peritonitis".....John J. Tuller,M.D.
"Sclerosis of the Coronary Arteries with consequent Myocardial changes" .....C. H. Norton, M.D.
"Uraemia. A case simulating Tetanus".....John J. Tuller, M.D.
"Senile Pneumonia".....Oliver S. Haines, M.D.
"Adens Carcinoma of Pancreas." Microscopic Slides.....Oliver S. Haines, M.D.
"Carcinoma of Breast." Microscopic slides.....Joseph C. Guernsey, M.D.
"Tubercular Peritonitis." Miscroscopic slides.....T. J. Gramm, M.D.
"Scarlet Fever".....S. W. Sappington, M.D.
"Acute Pneumonii Tuberculosis simulatim Empyema"...S. W. Sappington, M.D.
"Demonstration of new instrument for Gastric Analyses".....C. S. Raue, M.D.

W. B. Van Lennep Clinical Club. Organized 1895. Not incorporated. The annual meeting is held in Philadelphia, Pa., on the first Tuesday in May of each year. Monthly meetings are held at the offices of the different members, alternately, on the first Tuesday in each month. President, J. Wyllis Hassler, M.D., 1503 Poplar Street, Philadelphia, Pa. Secretary, Biddle R. Marsden, M. D., 8328 Germantown Avenue, Germantown, Philadelphia, Pa. Number of members, 19. Annual dues, $3.00. Delegate, J. Wyllis Hassler, M.D.

Von Grauvogle Club of Philadelphia, Pa. We have been unable to obtain any report from this society for the past year.

Woman's Homœopathic Medical Club of Philadelphia. Organized 1883. Not incorporated. The annual meeting is held at 1719 Arch Street, Philadelphia, Pa., on the first Tuesday in November of each year. Monthly meetings are held at the offices of the different members, alternately, on the first Tuesday in ach month. President,, Julia G. Waylan, M.D., 1832 Tioga Street, Philadelphia, Pa. Secretary, Margaret C. Lewis, M.D., 4027 Spring Garden Street, Philadelphia, Pa. Number of members, 14; admitted the past year, 1.

WISCONSIN

Central Wisconsin Medical Club. Organized 1901. Not incorporated. Quarterly meetings are held in different places in Central Wisconsin, alternately, on the first Tuesdays in September, December, March and June of each year. President, Richard K. Paine, M.D., Manitowoc,, Wis. Secretary, Harvey B. Dale, M.D., Oshkosh, Wis. Number of members, 50; admitted the past year, 4. Annual dues, $2.00. Delegate, Richard K. Paine, M.D.

ALUMNI ASSOCIATIONS

Alumni Association of the Chicago Homœopathic Medical College. The annual meeting is held in Chicago, Ill., on "Commencement Day." President, D. A. Foote, M.D., Omaha, Neb. Secretary, Thomas E. Costain, M.D., 100 State Street, Chicago, Ill. Number of members, 1,187; admitted the past year, 37; died the past year, 5. Annual dues, $2.00.

Alumni Association of the Southern Homœopathic Medical College. Organized 1892. Not incorporated. The annual meeting is held in Baltimore, Md., on "Commencement Day." We have been unable to obtain any report from this society for the past year.

Alumni Association of Boston University School of Medicine. Organized 1870. Incorporated 1900. Annual meeting is held at Hotel Lenox, Boston, Mass., on "Commencement Day." President, Winfield S. Smith, M.D., 845 Boylston Street, Boston, Mass. Secretary, David W. Wells, M.D., "The Westminster," Copley Square, Boston, Mass. Number of members, 800; admitted the past year, 24; died the past year, 5. Annual dues, $1.00. Delegate, John L. Coffin, M.D.

Alumni Association of the Homœopathic College of the University of Michigan. Organized 1878. Incorporated 1878. The annual meeting is held in Ann Arbor, Mich., on "Commencement Day." President, John M. Lee, M.D., 121 Lake Avenue, Rochester, N. Y. Number of members, 200. Delegate, John M. Lee, M.D.

Alumni Association of Flower Hospital. Organized 1903. We have been unable to obtain any report from this society for the past year.

Alumni Association of the New York Homœopathic College and Hospital. Organized 1883. Incorporated 1899. The annual meeting is held in New York City on the first Thursday in May of each year. President, Willis A. Dewey, M.D., Ann Arbor, Mich. Secretary, A. Worrall Palmer, M.D., 210 West Fifty-seventh Street, New York City. Number of members, 500. Annual dues, $1.00.

Alumni Association of the New York College and Hospital for Women. Organized 1863. Not incorporated. The annual meeting is held in New York City on "Commencement Day." President, Katherine G. Townsend, M.D., 354 West One Hundred and Twenty-third Street, New York City. Secretary, Harriet W. Hale, M.D., 160 Decatur Street, Brooklyn, N. Y. Number of members, 135; died the past year, 2. Annual dues, $1.00.

Alumni Association of the Ward's Island and Metropolitan Hospitals. Organized 1896. Not incorporated. The annual meeting is held usually at "The Arena," New York City, on the first Wednesday in December of each year. President, George Taylor Stewart, M.D., 38 West Fifty-ninth Street, New York City. Secretary, Ephraim D. Klots, M.D., 132 West Forty-seventh Street, New York City. Number of members, 161; admitted the past year, 8; died the past year, 2. Annual dues, $1.00. Delegate, George Talyor Stewart, M.D.

Alumni Association of the Pulte Medical College. Organized 1878. Not incorporated. The annual meeting is held in Cincinnati, Ohio, on "Commencement Day." President, William C. Niebling, M.D., 204 South Main Street, Findlay, Ohio. Secretary, Charles E. Geiser, M.D., 1511 Baymiller Street, Cincinnati, Ohio. Number of members, 638; admitted past year, 10. Delegate, Thomas M. Stewart, M.D.

Alumni Association of Hahnemann Medical College of Philadelphia. Organized 1857. Not incorporated. The annual meeting is held in Philadelphia, Pa., on "Commencement Day." President, Daniel P. Maddux, M.D., Eighth and Madison Streets, Chester, Pa. Secretary, Woodward D. Carter, MD., 1311 South Broad Street, Philadelphia, Pa. Number of members, 1497; admitted the past year, 74; died the past year, 10. Delegate, Daniel P. Maddux, M.D.

MISCELLANEOUS HOMŒOPATHIC ASSOCIATIONS

"The Meissen." Organized 1893. Not incorporated. The annual meeting is held at the same place and time as the American Institute of Homœopathy. President, Mrs. Harris H. Baxter, 275 Prospect Street, Cleveland, Ohio. Secretary, Mrs. William H. Van den Burg, 232 West Forty-ninth Street, New York, N. Y. Number of members, 150; admitted the past year, 18. Annual dues, $1.00.

The New England Hahnemann Association. Organized 1895. Incorporated 1896. The annual meeting is held in Boston, Mass., on the second Monday in January of each year. President, Edmund S. Whitman, Pemberton Building, Boston, Mass. Secretary, George V. S. Michaelis, Globe Building, Boston, Mass. Number of members, 374.

Homœopathic Pharmaceutical Association of Pennsylvania. Organized 1881. Incorporated 1881. The annual meeting is held in Philadelphia, Pa. President, Frank J. Slough, M.D., Allentown, Pa. Secretary, A. P. Anschutz, Box 921 Philadelhia, Pa. Number of members, 13.

GENERAL HOMOEOPATHIC HOSPITALS IN THE UNITED STATES

CALIFORNIA

Fabiola Hospital Association, Homeopathic Department, Oakland, Cal. Incorporated 1877. Opened for patients 1877. Executive Officer, Mrs. John Yule, Chicago Avenue, East Oakland, Cal. Number of beds, 100. Number of patients treated the past year, 745. Value of hospital property, $75,000. Supported by pay of patients and the earnings of nurses. "There are no separate departments, but all physicians in good standing have the privilege of bringing their patients here."

CANADA

Montreal Homœopathic Hospital, Montreal, Canada. Not incorporated. Opened for patients 1893. Executive Officer, Miss E. Rose Lorenz. Number of beds 45. Number of patients treated last year, 317. Value of hospital property, $30,000. Supported by pay of private patients, endowment of $12,000, and public subscriptions. Attending physician, Alexander R. Griffith, M.D., 763 Wellington Street, Montreal, Canada.

COLORADO

Denver City and County Hospital, Homœopathic Department, Denver, Col. Executive Officer, William Clark, Superintendent, Denver, Col. Number of beds, 300. Number of patients treated last year, 1,842. Value of hospital property, $500,000. Supported by County appropriation. Delegate, David A. Strickler, M.D. "This hospital has two medical staffs, one old school and one homœopathic. The patients are divided equally between the two."

Denver Homœopathic Hospital, Denver, Col. Incorporated 1894. Opened for patients 1895. Executive Officer, Chauncey E. Tennant, M.D., Steele Block, Denver, Col. Number of beds, 28. Number of patients treated the past year, 228. Value of hospital property, $35,000. Supported by pay of patients and voluntary contributions. Delegate, David A. Strickler, M.D.

CONNECTICUT

Grace Homœopathic Hospital, New Haven, Conn. Incorporated 1888. Opened for patients 1892. Executive Officer, Emory J. Walker, M.D., 1136 Chapel Street, New Haven, Conn. Number of beds, 75. Number of patients treated the past year, 527. Value of hospital property, $100,000. Supported by pay of patients, State appropriation, and collections from Churches.

DELAWARE

Homœopathic Hospital of Delaware, Wilmington, Del. Incorporated 1888. Opened for patients 1888. Executive Officer, Mrs. Emma G. Quigley, 601 West Eighth Street, Wilmington, Del. Number of beds, 42. Number of patients treated the past year, 299. Value of hospital property, $25,000. Supported by annual subscriptions, donations, board of patients, pay of nurses. Delegate, Lewis W. Flinn, M.D.

DISTRICT OF COLUMBIA

National Homœopathic Hospital Association, Washington, D. C. Incorporated 1881. Opened for patients 1881. Executive Officer, Lyman B. Swormstedt, M.D., 1455 Fourteenth Street, N. W., Washington, D. C. Number of beds, 51. Number of patients treated last year, 1,237. Value of hospital property, $55,000. Supported by pay of patients, government appropriation, Auxilliary Association.

FLORIDA

St. Luke's Hospital, Homœopathic Department, Jacksonville, Fla. Incorporated 1882. Opened for patients 1882. Number of patients treated the past year, 5. Supported by donations and fees of patients. Delegate, Henry R. Stout, M.D.

ILLINOIS

Cook County Hospital, Homœopathic Department, Chicago, Ill. Incorporated 1865. Opened for patients 1865. Number of beds, (Homœopathic) 150. There are two medical staffs in this hospital. We have been unable to obtain any report from this hospital this year.

Hahnemann Hospital, Chicago. Incorporated 1855. Opened for patients 1870. Executive Officer, George F. Shears, M.D., 3130 Indiana Avenue, Chicago, Ill. Number of beds, 170. Number of patients treated the past year, 1,365. Value of hospital property, $200,000. Supported by endowments, donations, fees of private patients. Delegate, Joseph P. Swan, M.D. "This hospital is one of the recognized hospitals of the City; standing is excellent. All schools recognize it. Its growth is uniform."

Chicago Homœopathic Hospital, Chicago, Ill. Incorporated 1876. Opened for patients 1876. Executive Officer, M. G. Black, M.D., 1222 Washington Boulevard, Chicago, Ill. Number of beds, 40. Number of patients treated the past year, 474.

Value of hospital property, $30,000. Supported by voluntary contributions. Delegate, William M. Stearns, M.D.

Moline Public Hospital, Moline, Ill. Incorporated 1898. Opened for patients 1898. Executive Officer, W. A. MacBeth, Moline, Ill. Number of beds, 35. Number of patients treated the past year, 339. Value of hospital property, $40,000. Supported by five mill tax, and receipts from patients.

IOWA

Homœopathic Hospital of the State University of Iowa, Iowa City, Iowa. Incorporated 1887. Opened for patients 1887. Executive Officer, James G. Gilchrest, M.D., 215 College Street, Iowa City, Iowa. Number of beds, 64. Number of patients treated the past year, 505. Value of hospital property, $60,000. Supported by State appropriation, and board of patients. Delegate, George Royal, M.D.

St. Bernard's Hospital, Homœopathic Department, Council Bluffs, Iowa. Incorporated 1888. Opened for patients 1888. "This hospital has been changed to an asylum for the insane. We have not organized yet for this new (Mercy) hospital. It has 100 beds and cost $75,000. We homœopaths have, or are supposed to have, equal rights with the old school." Attending physician, Phineas J. Montgomery, M.D.

Woman's Christian Association Hospital, Homœopathic Department, Council Bluffs, Iowa. Incorporated 1894. Opened for patients, 1894. Number of beds, 30. We have been unable to obtain any report from this hospital this year. The Executive Officer for last year was Miss M. E. S. Pinney, Council Bluffs, Iowa.

Samaritan Hospital and Training School for Nurses, Sioux City, Iowa. Incorporated 1894. Opened for patients 1894. Executive Officer, Mrs. W. Stinson, Sioux City, Iowa. Number of beds, 60. Number of patients treated the past year, 737. Operations performed, 839. Value of hospital property, $30,000. Supported by pay of patients. Delegate, A. Perry Bowman, M.D. "This hospital is open to both schools of medicine, and members of both schools serve together on the Medical Staff and lecture to the members of the Training School."

KENTUCKY

City Hospital, Homœopathic Department, Louisville, Ky. Incorporated 1882. Opened for patients 1882. Executive Officer, Ellis Duncan, M.D., City Hospital, Louisville, Ky. Number of beds, 150. Number of patients treated, 509. Value of hospital property, $750,000. Supported by taxation. Delegate, George S. Conn, M.D.

Southwestern Homœopathic Hospital, Louisville, Ky. Incorporated 1892. Opened for patients, 1892. Executive Officer, O. F. Miller, M.D., 1720 Sixth Street, Louisville, Ky. Number of beds, 10. Number of patients treated the past year, 109. Supported by donations and fees of patients. Delegate, George S. Coon, M.D.

MARYLAND

Maryland Homœopathic Hospital, Baltimore, Md. Incorporated 1890. Opened for patients 1890. Executive Officer, John T. Graham, 223 St. Paul Street, Baltimore, Md. Number of beds, 61. Number of patients treated the past year, 1,045. Value of hospital property, $48,000. Supported by State, City appropriations, voluntary contributions, and pay of patients. Delegate, Henry Chandlee, M.D. "The past year has been a very successful one; a very large increase over past years."

MASSACHUSETTS

Massachusetts Homœopathic Hospital, Boston, Mass. Incorporated 1855. Opened for patients 1856. Executive Officer, William O. Mann, M.D., East Concord Street, Boston, Mass. Number of beds, 234. Number of patients treated the past year, 3,074. Value of hospital property, $500,000. Supported by endowment and pay of patients. "The hospital has treated 467 more patients during the past year than in the year 1901. This is the largest number ever treated in any one year. It is a fact of some significance that the death rate in this hospital has always been below five per cent and very seldom above four and one-half per cent, which is unusually low as compared with that of other similar institutions, public or private, in Boston or elsewhere. The number of cases treated on the medical

side during the past year has been 643, on the surgical side, 2,155, and 276 in the Maternity Department."

Brockton Cty Hospital, Homœopathic Department, Brockton, Mass. Incorporated 1890. Opened for patients 1896. Executive Officer, C. M. Hickey, 35 Belmot Street, Brockton, Mass. Number of beds, 30. Number of patients treated the past year, 337. Value of hospital property, $50,000. Supported by endowment fund of $20,000, general contributions, and pay of patients. "There is, at the present time, but one Homœopathic physician on the active Staff of the Hospital. At the beginning there were three, but one of them resigned, and one has been put upon Electro-Therapeutics. We are hoping to have another Homœopathic added to our active Staff in the near future."

Rufus S. Frost's General Hospital, Homœopathic Department, Chelsea, Mass. Incorporated 1890. Opened for patients 1890. Executive officer, Frank E. Guild, Secretary, 270 Chestnut Street, Chelsea, Mass. Number of beds, 50. Number of patients treated the past year, 325. Value of hospital property, $30,000. Supported by City appropriations, pay of patients, and earnings. Delegate, Edward Blaisdell, M.D. "The patients are divided equally between the physicians of the two schools of medicine. There has always existed the most pleasant relations between all the members of the Medical Staff. The most perfect harmony exists, and there has never been the slightest friction."

Lowell General Hospital, Homœopathic Department, Lowell, Mass. Incorporated 1891. Opened for patients, 1893. Executive Officer, Miss Helen Garrett, at the Hospital. Number of beds, 42. Number of patients treated the past year, 335. Value of hospital property, $50,000. Supported by endowed beds, pay of patients, donations from churches and individuals. Delegate, G. Forrest Martin, M.D. "The hospital is now free from debt. There has been $105,000 added to our Endowment Fund during the past year."

Malden Hospital, Homœopathic Department, Malden, Mass. Incorporated 1890. Opened for patients 1892. Executive Officer, E. F. Bickford, M.D., care of B. R. S. Co., Malden, Mass. Number of beds, 45. Number of patients treated last year, 28, by the Homœopathic Staff. Value of hospital property, $80,000. Supported by endowment and pay of patients. "Both schools of medicine have equal privileges."

Newton Hospital, Homœopathic Department, Newton, Mass. Incorporated 1881. Opened for patients, 1886. Executive Officer, Hon. J. R. Leeson, Newton, Mass. Number of beds, 150. Number of patients treated the past year, 824. Value of hospital property, $159,000. Supported by endowment, City appropriations, and pay of private patients. Delegate, George H. Talbot, M.D.

City Hospital, of Quincy, Homœopathic Department, Quincy, Mass. Incorporated 1889. Opened for patients 1890. Number of beds, 25. We have been unable to obtain any report from this hospital this year. The Executive Officer last year was Timothy Reed, Quincy, Mass., and the attending physician was Henry C. Hallowell, M.D.

Somerville Hospital, Homœopathic Department, Somerville, Mass. Incorporated 1891. Opened for patients 1893. Executive Officer, Miss Alma C. Hogle, Matron, Hospital, Somerville, Mass. Number of beds, 40. Value of hospital property, $55,000. Supported by endowments, pay of patients, society beds, and city appropriations. Delegate, Frank L. Newton, M.D. "The annual 'Donation Day' is a feature of much interest and adds very materially to the support of the hospital. It is a 'Union' hospital, both schools of practice being represented on the medical Staff."

Hampden Homœopathic Hospital, Springfield, Mass. Incorporated 1900. Opened for patients 1900. Executive Officer, William W. McClench, Springfield, Mass. Number of beds, 20. Number of patients treated the past year, 165. Value of hospital property, $50,000. Supported by donations and pay from patients. Delegate, John H. Carmichael, M.D. "The building contains thirty beds, and is surrounded by a lot of land containing a grove and several fine springs. It was the gift of Mr. and Mrs. D. B. Wesson, and was formerly occupied by them as their residence The location is an ideal one, and cannot be surpassed by any in the country, with room enough for all the future needs of the present century. There is a training school in connection with the hospital, amply supplied with trained nurses."

Worcester Hahnemann Hospital, Worcester, Mass. Incorporated 1896. Opened for patients 1896. Executive Officer, Edward B. Miles, Worcester, Mass. Number of beds, 16. Number of patients treated the past year, 92. Value of hospital property, $25,000. Supported by pay of patients and private donations. Delegate, Lamson Allen, M.D. "The treatment of all cases is strictly in accordance with the principles of Homœopathy. The hospital is gaining every year."

MICHIGAN

Homœopathy Hospital of the University of Michigan, Ann Arbor, Mich. Incorporated 1874. Opened for patients 1875. Executive Officer, R. E. Atchison, M.D., Ann Arbor, Mich. Number of beds, 120. Number of patients treated the past 1,950. Value of hospital property, $150,000. Supported by State appropriation. Delegate, Royal E. Copeland, M.D.

The Grace Hospital, Detroit, Mich. Incorporated 1888. Opened for patients, 1888. Executive Officer, A. T. Putnam, Superintendent, Detroit, Mich. Number of beds, 125. Number of patients treated the past year, 1,506. Value of hospital property, $250,000. Supported by endowment fund and pay of patients.

Muskegon City Hospital. "At the present time our city has no hospital, but in the near future we are to have one of fifty beds, the gift of our philanthropic citizen, C. H. Hackley. It is to be an up to date institution in every respect, and free to all."

MINNESOTA

City Hospital, Homœopathic Department, Minneapolis, Minn: Executive Officer, George E. Ricker, M.D., 75 Syndicate Building, Minneapolis, Minn. Number of beds, 175. Number of patients treated the past year, 285. Value of hospital property, $195,000. Supported by city appropriation, and small income from patients. "The hospital is for Allopathic and Homœopathic patients, the members of the Homœopathic staff receiving one-fifth of all the patients. The number of patients treated by the Homœopathic staff was 285."

City and County Hospital, Homœopathic Department, St. Paul, Minn. Incorporated 1875. Opened for patients 1875. Executive Officer, A. B. Aucker, M.D., St. Paul, Minn. Number of beds, 250. Value of hospital property, $350,000. Supported by city and county tax, and pay of private patients. Delegate, Warren S. Briggs, M.D. "The Homœopathic Department has every fourth patient who is received."

St. Joseph's Hospital, Homœopathic Department, St. Paul, Minn. Incorporated 1854. Opened for patients 1854. There is a Homœopathic medical and surgical staff attached to this hospital. Executive Officer, Mother Bernardine, St. Paul, Minn. Value of hospital property, $150,000. Supported by pay of patients. Total number of patients treated in hospital the past year, 2,040. Number treated by the Homœopathic physicians, 42. "There are two Homœopathic physicians upon the non-resident staff."

St. Luke's Hospital, Homœopathic Department, St. Paul, Minn. We have been unable to obtain any report from this hospital this year.

MISSOURI

Homœopathic Hospital and Training School of Kansas City, Mo. Incorporated 1900. Opened for patients 1899. Executive Officer, Mrs. W. E. Dockson, 402 Whittier Place, Kansas City, Mo. Number of beds, 12. Number of patients treated the past year, 204. Value of hospital property, $6,000. Supported by pay of patients.

Hospital for Women and Children, Homœopathic Department, Kansas City, Mo. Incorporated 1897. Opened for patients 1897. We have been unable to obtain any report from this hospital this year.

Good Samaritan Homœopathic Hospital and Asylum, of St. Louis, Mo. Incorporated 1858. Opened for patients 1858. Number of beds, 90. We have been unable to obtain any report from this hospital this year. The Executive Officer last year was William G. Mueller, Second and Washington Avenues, St. Louis, Mo.

St. Louis Children's Hospital, St. Louis, Mo. Incorporated 1879. Opened for patients 1880. Executive Officer, Charles H. Goodman, M.D., 3329 Washington Avenue, St. Louis, Mo. Number of beds, 100. Number of patients treated

the past year, 480, not including the out door patients or the clinic. Value of hospital property, $40,000. Supported by voluntary contributions. Delegate, T. Griswold Comstock, M.D.

NEW JERSEY

West Jersey Homœopathic Hospital, Camden, N. J. Incorporated 1891. Opened for patients 1891. Executive Officer, Lee E. Griscom, M.D., 919 South Fifth Street, Camden, N. J. Number of beds, 40. Number of patients treated last year, —. Value of hospital property, $15,000. Supported by voluntary contributions. "An adjoining property has been purchased and opened for male patients."

St. Mary's Hospital, Passaic, N. J. Incorporated 1895. Opened for patients 1895. Executive Officer, Charles A. Church, M.D., Passaic, N. J. Sister Rose Vincent, in charge, St. Mary's Hospital, Passaic, N. J. Number of beds, 50. Number of patients treated the past year, 378. Value of hospital property, $50,000. Supported by county appropriations and voluntary contributions. Delegate, Charles A. Church, M.D.

The William McKinley Memorial Hospital, Trenton, N. J. Incorporated 1887. Opened for patients 1887. Executive Officer, E. S. Davis, Superintendent Hospital, Trenton, N. J. Number of beds, 75. Number of patients treated the past year, 449. Value of hospital property, $75,000. Supported by charitable donations. "This hospital was incorporated in 1887 as the Trenton City Hospital. Re-incorporated in 1902 as The William McKinley Memorial Hospital. It is the only Homœopathic institution in the city of Trenton."

NEW YORK

Albany City Homœopathic Hospital, Albany, N. Y. Incorporated 1867. Opened for patients 1868. Number of beds, 50. We have been unable to obtain any report from this hospital this year. The Executive Officer last year was James W. Cox, 160 State Street, Albany, N. Y.

Brooklyn Homœopathic Hospital, Brooklyn, N. Y. Incorporated 1852. Opened for patients 1858. We have been unable to obtain any report from this hospital this year. The Executive Officer last year was Frank W. Arnold, 117 Montague Street, Brooklyn, N. Y.

Cumberland Street Hospital, Brooklyn, N. Y. Incorporated 1902. Opened for patients July 1st, 1902. Executive Officer, C. B. Bacon, M.D., Superintendent. Number of beds, 200. Number of patients treated the past year, 870. Value of hospital property, $175,000. It is operated under Department of Public Charities. "Has a Training School for Nurses, with a three year course."

Memorial Hospital for Women and Children, Brooklyn, N. Y. Incorporated 1883. Opened for patients 1881. Executive Officer, Mrs. A. H. Tifft, President, Clarendon Hotel, Brooklyn, N. Y. Number of beds, 70. Number of patients treated the past year, 646. Value of hospital property, $100,000. Supported by voluntary contributions, private patients, and nurses wages. "This hospital is managed by women and the staff is composed of women only."

Buffalo Homœopathic Hospital, Buffalo, N. Y. Incorporated 1872. Opened for patients 1872. Executive officers: Mrs. Charles J. Worth, President, 51 Johnson Park, Buffalo, N. Y. Number of beds, 61; number of patients treated last year, 492. Value of hospital property, $12,000. Supported by a small Endowment Fund, donations, city and county aid, pay of private patients.

Erie County Hospital, Homœopathic Department, Buffalo, N. Y. Incorporated 1895. Opened for patients 1895. Executive Officer:, E. J. Gilroy, M.D., Erie County Hospital, Buffalo, N. Y. Number of beds, 400. Value of hospital property, $580,000. Supported by county and city appropriations. Delegates, DeWitt G. Wilcox, M.D. "The Homœopathic members of the staff are on service three months in the year."

Geneva City Hospital, Geneva, N. Y. Incorporated 1889. Opened for patients 1889. Executive Officer, Charles Mellen, Geneva, N. Y. Number of beds, 35. Number of patients treated the past year, 208. Value of hospital property, $50,000. Supported by general contributions, and an Endowment Fund of $30,000. Delegate, N. B. Covert, M.D. "We have erected a contagious building during the past year, a gift of Mrs. McBlair. The hospital recognizes neither school of practice exclusively, and both schools are represented on the medical staff, and serve

in the regular order, two months each. Any physician in good standing is entitled to take his patients to the hospital for treatment."

Flagler Hospital, Lockport, N. Y. Not incorporated. Opened for patients 1889. Executive Offier, George H. Mirrard, M.D., Lockport, N. Y. Miss Helen M. Farley, Matron. Number of beds, 5. Number of patients treated the past year, 20, of which 9 were emergency cases, and 11 were private patients. Value of hospital property, $3,000. Supported by city appropriation and pay of private patients. "This hospital was the gift of Hon. T. T. Flagler, and is used for emergency cases for the care of which the city allows five dollars each per week."

Hahnemann Hospital, New York, N. Y. Incorporated 1869. Opened for patients 1869. Executive Officer, John H. Thompson, M.D., 36 East Thirtieth Street, New York City. Number of beds, 136. Number of patients treated the past year, 850. Value of hospital property, $165,000. Supported by pay of private patients, voluntary contributions, donations, and interest from invested funds. Delegate, John H. Thompson, M.D.

Laura Franklin Free Hospital for Children, New York, N. Y. Incorporated 1888. Opened for patients 1888. Executive Officer, H. Worthington Paige, M.D., 256 West Fifty-seventh Street, New York City. Number of beds, 50. Number of patients treated the past year, 347. Value of hospital property, $150,000. Supported by an Endowment Fund and voluntary contributions. Delegate, H. Worthington Paige, M.D. "The mortality rate the past year was four per cent. Of the 347 patients treated the past year, 156 were surgical operations."

Metropolitan Hospital, New York, N. Y. Not incorporated. Opened for patients 1875. Executive Officer, Charles C. Boyle, M.D., 49 West Thirty-seventh Street, New York City. Number of beds, 732. Number of patients treated the past year, 6,295. Hospital is under the management of Department of Public Charities. Delegate, E. Guernsey Rankin, M.D. "When the alterations now under way are completed the hospital will have a capacity of one thousand beds. The new tuberculosis ward is under full operation, and has proven to be a very great success; some new pavilions will soon be added to it. A new Roentgen Ray apparatus has recently been added to the equipment of the hospital."

New York Homœopathic Medical College and Hospital, New York, N. Y. Incorporated 1856. Opened for patients 1870. Executive Officer, Anson R. Flower, President, New York City. Number of beds, 100. Number of patients treated the past year, 10,372. Value of hospital property, $350,000. Supported by Endowments and pay of private patients.

New York Medical College and Hospital for Women, New York, N. Y. Incorporated 1863. Opened for patients 1864. Executive Officer, Mrs. H. L. Bender, 816 Marcy Avenue, Brooklyn, N. Y. Number of beds, 50. Number of patients treated the past year, 104. Delegate, M. Belle Brown, M.D. "All departments of our work are prosperous, the classes are well filled, and several new professorships have been added to the Faculty and list of lecturers and assistants. A complete electrical equipment of the latest methods has been provided and established in one of the lecture rooms. An elaborate and unexcelled operating theater has also been added and thoroughly supplied with all modern appliances in surgery. The Lozier Memorial Training School for Nurses has opened its new term with a larger number of students than ever before. The dispensary, which had been necessarily suspended during the building operations, has again opened its doors, and has a daily increasing number of applicants."

Hahnemann Hospital, Rochester, N. Y. Incorporated 1887. Opened for patients 1889. Executive Officer, W. H. H. Rogers, M.D., 243 Powers Building, Rochester, N. Y. Number of beds, 75. Number of patients treated the past year, 209. Value of hospital property, $45,000. Supported by earnings, donations and bequests. Delegate, J. R. Bigler, M.D. "This hospital is nearly perfect in all of its arrangements; ventilation and drainage are perfect. The site cannot be surpassed. The operating rooms are as perfect as can be made, being up-to-date in every particular. Last year a new building was erected and presented to us. We have no debts, and a good cash balance in the treasury. The practice is purely and strictly Homœopathic in every particular."

Rochester Homœopathic Hospital, Rochester, N. Y. Incorporated 1887. Opened for patients 1889. Executive Officer, Granger A. Hollister, Rochester, N. Y. Number of beds, 125. Number of patients treated the past year, 1,653.

Value of hospital property, $250,000. Supported by voluntary contributions and pay of patients. Delegate, Edwin H. Wolcott, M.D.

Syracuse Homœopathic Hospital, Syracuse, N. Y. Incorporated 1895. Opened for patients 1897. Number of beds, 14. We have been unable to obtain any report from this hospital this year. The Executive Officer last year was E. Elmer Keeler, M.D.,, 452 South Salina Street, Syracuse, N. Y.

Utica Homœopathic Hospital, Utica, N. Y. Incorporated 1895. Opened for patients 1895. Executive Officer, George S. Dana, Secretary, Utica, N. Y. Number of beds, 15. Number of patients treated the past year, 243. Value of hospital property, $20,000. Supported by pay of patients, and donations.

OHIO

Ohio Hospital for Women and Children, Cincinnati, Ohio. Incorporated 1881. Opened for patients 1882. Executive Officer, Mrs. Robert Hose Clifton, Cincinnati, Ohio. Number of beds, 21. Number of patients treated last year, 106. Value of hospital property, $25,000. Supported by membership fees, donations, bequests, and income from private patients. Delegate, Ellen M. Kirk, M.D.

City Hospital, Homœopathic Department, Cleveland, Ohio. Executive Officer, Frederick P. Emde, Superintendent, City Hospital, Scranton Avenue, Cleveland, Ohio. Number of beds, 400, of which one-fourth are assigned to the Homœopathic staff. Value of hospital property, $300,000. Supported by city appropriations. "The hospital is open to physicians of both schools of practice."

Cleveland Homœopathic Hospital, Cleveland, Ohio. Incorporated 1874. Opened for patients 1874. Executive Officer, Harlan Pomeroy, M.D., 116 Ingleside Avenue, Cleveland, Ohio. Number of beds, 100. Number of patients treated the past year, 1,541. Value of hospital property, $200,000. Supported by pay of patients, endowment, and donations. Delegate, Harlan Pomeroy, M.D. "There is a Training School for Nurses connected with this hospital, which was opened in 1886. There are at the present time 27 members of the school."

Lakeside Hospital, Cleveland, Ohio. Incorporated 1852. Opened for patients 1852. Executive Officer, Samuel Mather, President, Reserve Building, Cleveland, Ohio. Number of beds, 210. Number of patients treated the past year, 2,660. Value of hospital property, $1,000,000. Supported by endowment, donations and pay of patients.

Miami Valley Hospital, Homœopathic Department, Dayton, Ohio. Incorporated 1890. Opened for patients 1894. Executive Officer, Miss Ella J. Crandall, Miami Valley Hospital, Dayton, Ohio. Number of beds, 150. Number of patients treated the past year, 1,168. This number includes those treated by both schools of practice. Value of hospital property, $200,000. Supported by city appropriations and voluntary contributions. "This hospital started with the Deaconess system. It is now conducted with the usual training school system. It has two staffs of physicians. A nurses home, costing $50,000, and an operating room costing $30,000, both gifts of generous women of Dayton, are now in course of erection. The number of patients treated by the Homœopathic staff during the past year was 280."

Mitchell Thomas Hospital, Homœopathic Department, Springfield, Ohio. Incorporated 1886. Opened for patients 1886. Executive Officer, Mrs. Barnett, Mitchell Thomas Hospital, Springfield, Ohio. Number of beds, 100. Number of patients treated last year, 557. Value of hospital property, $70,000. Supported by tax levy and private wards. Delegate, H. T. Miller, M.D. "While this hospital is not in the least sectarian in regard to the school of medicine to which the members of the medical staff belong, yet the surgical staff has always been under the control of the Homœopathic members, H. T. Miller, M.D., being the surgeon-in-chief. A new site for the hospital has been selected, and a building to cost $60,000 will be erected upon it."

Toledo Hospital, Homœopathic Department, Toledo, Ohio. Incorporated 1876. Opened for patients 1874. Executive Officer, Mrs. A. E. Scott, Secretary, 721 Ontario Street, Toledo, Ohio. Number of beds, 100. Number of patients treated the past year, 922. Value of hospital property, $140,000. Supported by pay of patients and donations. Delegate, Lewis K. Maxwell, M. D. "The hospital was closed for one month during the year because of small pox quarantine. An annex, costing $20,000, has been built and opened during the past year."

Mahoning Valley Hospital, Homœopathic Department, Youngstown, Ohio. We have been unable to obtain any report from this hospital for this year.

Zanesville City Hospital, Homœopathic Department, Zanesville, Ohio. Incorporated 1888. Opened for patients 1891. We have been unable to obtain any report from this hospital this year.

OREGON

Homœopathic Hospital, Portland, Oregon. We have been unable to obtain any report from this hospital this year.

PENNSYLVANIA

Beaver Valley General Hospital, Homœopathic Department, New Brighton, Pa. Incorporated 1894. Opened for patients 1894. Executive Officer, James F. Merriman, Secretary, Beaver Falls, Pa. Number of beds, 26. Number of patients treated during the past year by the Homœopathic Staff, 34. Value of hospital property, $15,000. Supported by State appropriations, donations and pay of patients. Delegate, Seymour B. Moon, M.D. "This hospital has two Medical Staffs, one old school and one Homœopathic."

Children's Homœopathic Hospital of Philadelphia, Pa. Incorporated 1877. Opened for patients 1877. Executive Officer, Walter Strong, M.D., 2105 North Thirteenth Street, Philadelphia, Pa. Number of beds, 58. Number of patients treated the past year, 508 in wards, 2,057 in Accident ward. Value of hospital property, $125,000. Supported by State appropriation, Endowment Fund, voluntary contributions. "During the coming year new Buildings will be erected which will double the capacity of the institution. This hospital is a Homœopathic hospital in practice as well as in name. Delegate, Augusta Korndoerfer, Sr., M.D.

Hahnemann Medical College Hospital, Philadelphia, Pa. Incorporated 1869. Opened for patients 1871. Executive Officer, Charles Mohr, M.D., Oak Lane, Philadelphia, Pa. Number of beds, 200. Number of patients treated the past year, patients in ward, 2,053; in emergency wards, 12,245. Supported by endowments, board of patients, State appropriation, and volunteer donations. Delegate, Charles Mohr, M.D. "The hospital is to be enlarged by the erection of four additional buildings, at a cost of about $300,000. The buildings will be started in July, 1903."

Medical, Surgical and Maternity Hospital of the Woman's Homœopathic Association of Pennsylvania, Philadelphia, Pa. Incorporated 1882. Opened for patients 1883. Executive Officer, Mrs. F. B. Skinner, Provident Building, Philadelphia, Pa. Number of beds, 80. Number of patients treated the past year, 983. Value of hospital property, $300,000. Supported by voluntary subscriptions, donations, a small endowment fund, entertainments and board of patients.

St. Luke's Homœopathic Hospital, Philadelphia, Pa. Incorporated 1896. Opened for patients 1896. Executive Officer, Miss Mary E. Lewars, 84 Fisher's Lane, Germantown, Philadelphia, Pa. Number of patients treated the past year, 454. Value of hospital property, $32,000. Supported by State appropriation, pay of private patients, donations. Delegate, Thomas H. Carmichael, M.D. "Since the hospital was opened we have been occupying and using two private houses, but now are about to build an up to date building, well equipped in every particular, and expect to do much better work than we have ever been able to accomplish before."

Woman's Southern Homœopathic Hospital, Philadelphia, Pa. Incorporated 1896. Opened for patients in 1896. Executive Officer, Miss Annie M. Miller, 1911 Mount Vernon Street, Philadelphia, Pa. Number of beds, 30. Number of patients treated the past year, 190. Value of hospital property, $20,000. Supported by voluntary contributions.

Homœopathic Medical and Surgical Hospital of Pittsburg, Pa. Incorporated 1866. Opened for patients 1866. Executive Officer, D. G. Stewart, 1019 Liberty Avenue, Pittsburg, Pa. Number of beds, 125. Number of patients treated the past year, 2,678. Value of hospital property, $75,000. Supported by pay of patients, contributions, and interest on endowment fund. Delegate, James H. McClelland, M.D.

Homœopathic Medical and Surgical Hospital of Reading, Pa. Incorporated 1890. Opened for patients 1891. Lewis A. Schollenberger, M.D., 637 Walnut

Street, Reading, Pa. Number of beds, 22. Number of patients treated the past year, 193. Value of hospital property, $35,000. Supported by State appropriation, voluntary contributions, nurses' services, and pay from private patients. Delegate, D. C. Kline, M.D.

Hahnemann Hospital, Scranton, Pa. Incorporated 1897. Opened for patients 1897. Executive Officer, Mrs. Henry Belin, Jr., Scranton, Pa. Number of beds, 30. Number of patients treated the past year, 342 in patients, 688 out patients, a total of 1,040. Hospital is occupying a rented building. Supported by State appropriation, and private contributions. Delegate, John W. Coolidge, M.D.

WISCONSIN

Knowlton Hospital, Homœopathic Department, Milwaukee, Wis. Incorporated 1900. Opened for patients 1900. Executive Officer, Miss Knowlton, Milwaukee, Wis. Number of beds, 40. Number of patients treated last year, 56. Value of hospital property, $25,000. Supported by pay from patients. Delegate, Philip A. Forsbeck, M.D.

PRIVATE AND SPECIAL HOMOEOPATHIC HOSPITALS

ARKANSAS

Keeley Institute, Hot Springs, Ark. Not incorporated. Opened for patients 1891. Executive Officer, Robert M. Huntington, M.D., Hot Springs, Ark. Number of beds, 15. Number of patients treated the past year, 78. Value of hospital property, $15,000. Supported by pay of patients. Delegate, Robert M. Huntington, M.D.

CALIFORNIA

Southern California State Hospital, Patton, Cal. Incorporated 1893. Opened for patients 1893. Executive Officer, Merritt B. Campbell, M.D., Patton, Cal. Number of beds, 704. Number of patients treated the past year, 941. Value of hospital property, $600,000. Supported by Legislative appropriation, and receipts from pay patients. Delegate, Merritt B. Campbell, M.D.

ILLINOIS

Deaconess Hospital, Homœopathic Department, Bloomington, Ill. Attending physicians, B. P. Marsh, M.D., A. J. Morris, M.D., William E. Nieberger, M.D., Bloomington, Ill. Number of beds, 31. "This hospital is open to physicians of both schools of practice, and three Homœopathic physicians are on the Medical Staff."

Luella Day Membership Hospital, Chicago, Ill. We have been unable to obtain any report from this hospital this year.

National Temperance Hospital, Homœopathic Department, Chicago, Ill. Incorporated 1886. Opened for patients 1886. We have been unable to obtain any report from this hospital this year.

Streeter's Hospital, Chicago, Ill. Incorporated 1888. Opened for patients 1888. Executive Officer, John W. Streeter, M. D., 2001 Prairie Avenue, Chicago, Ill. Number of beds, 30. Number of patients treated the past year, 327. Value of hospital property, $70,000. Supported by pay of patients. Delegate, Edwin H. Pratt, M.D.

Englewood Union Hospital and Dispensary, Englewood, Ill. Incorporated 1895. Opened for patients 1896. We have been unable to obtain any report from this hospital this year.

St. Joseph's Hospital, Homœopathic Department, Joliet, Ill. We have been unable to obtain any report from this hospital this year.

Rockford Hospital, Rockford, Ill. Incorporated 1883. Opened for patients 1883. Number of beds, 30. We have been unable to obtain any report from this hospital this year. The Executive Officer last year was Wait Talcott, Rockford, Ill.

Illinois Northern Hospital for the Insane, Elgin, Ill. Incorporated 1869. Opened for patients 1872. Executive Officer, Frank S. Whitman, M.D., Hospital, Elgin, Ill. Number of beds, 1,210. Number of patients treated the past year, 1,631. Value of hospital property, $900,000. Supported by State appropriation. Delegate, Frank S. Whitman, M.D. "This Institution has not yet been turned over to the Homœopathic branch of the profession."

Illinois Western Hospital for the Insane, Watertown, Ill. Incorporated 1895. Opened for patients 1898. Executive Officer, W. E. Taylor, M.D., Superintendent, Watertown, Ill. Number of beds, 830. Number of patients treated the past year, 979. Value of hospital property, $650,000. Supported by State appropriation. Delegate, W. E. Taylor, M.D.

INDIANA

O. S. Runnel's Private Hospital, Indianapolis, Ind. Not incorporated. Opened for patients 1890. Executive Officer, Orange S. Runnels, M. D., 522 North Illnois Street, Indianapolis, Ind. Number of beds, 20. Number of patients treated last year, 109. Value of hospital property, $30,000. Supported by pay of patients. Delegate, Orange S. Runnels, M.D.

Banning Orthopædic Institute, Fort Wayne, Ind. Not incorporated. Opened for patients 1896. This institution is temporarily closed in consequence of a railway accident injuring Dr. Banning so that he has been obliged to give up his practice for the present.

Muncie Hospital and Invalid's Home, Homœopathic Department, Muncie, Ind. Not incorporated. Opened for patients 1891. Number of beds, 25. We have been unable to obtain any report from this hospital this year. The Executive Officer last year was W. D. Whitney, M.D., Muncie, Ind.

Epworth Hospital, South Bend, Ind. We have been unable to obtain any report from this hospital this year.

KENTUCKY

German Methodist Deaconess Home and Hospital, Louisville, Ky. Incorporated 1895. Opened for patients 1895. Executive Officer, Rev. J. F. Sereringhouse, 731 Eighth Street, Louisville, Ky. Number of beds, 25. Number of patients treated the past year, 223. Value of hospital property, $18,000. Supported by endowment fund, donations, and pay of patients. Delegate, George S. Coon, M.D. "We expect to enlarge our building during the present year, which will give us increased facilities for the enlargement of our work."

Pattie A. Clay Infirmary, Richmond, Ky. We have been unable to obtain any report from this hospital this year.

MAINE

Trull Hospital, Biddeford, Me. Incorporated 1902. Opened for patients June 1st, 1900. Executive Officer, J. Frank Trull, M.D., Biddeford, Me. Number of beds, 25. Number of patients treated the past year, 179. Value of hospital property, $40,000. Supported by pay of patients. Delegate, J. Frank Trull, M.D.

MASSACHUSETTS

Boothby Surgical Hospital, Boston, Mass. Incorporated 1900. Opened for patients 1889. Executive Officer, Walter M. Boothby, Boston, Mass. Number of beds, 50. Number of patients treated last year, 408. Value of hospital property, $60,000. Supported by pay of patients and nurses' fees. "At present the hospital is run for the accommodation of the physicians of the city, Homœopaths and Allopaths both receiving alike our services."

Burrage Hospital, Bumkin Island, Boston Harbor, Mass. Executive Officer, T. Morris Strong, M.D., 176 Huntington Avenue, Boston, Mass.

Cullis' Consumptive Home, New Dorchester, Mass. Incorporated 1871. Opened for patients 1864. Executive Officer, Rev. E. D. Mallory, Cullis' Consumptive's Home, New Dorchester, Mass. Number of beds, 40. Number of patients treated the past year, 82. Value of hospital property, $184,000. Supported by voluntary gifts and legacies.

St. Botholf Hospital, Boston, Mass. Incorporated 1901. Opened for patients 1898. We have been unable to obtain any report from this hospital this year.

Talitha Cumi Home of the New England Moral Reform Society, Boston, Mass. Incorporated 1846. Opened for patients 1836. Executive Officer, Caroline E. Hastings, M.D., Boston, Mass. Number of beds, 28. Number of patients treated last year, 65. Value of hospital property, $30,000. Supported by voluntary contributions, together with the fees of a small number of paying patients. Delegate, Julia Morton Plummer, M.D. "This Home continues to be carried on in absolute loyalty to Homœopathic principles, and with results which do honor to the law of 'Similia Similibus Curentur'."

Lowell Homœopathic Free Dispensary Association, Lowell, Mass. Not incorporated. Opened for patients 1894. Executive Officer, George L. Van Deursen, M.D., 17 Kirk Street, Lowell, Mass. Number of patients treated the past year, 570. Number of prescriptions given the past year, 2,731. Number of outside visits made the past year, 251. Cost of conducting the dispensary the past year, $600. Delegate, Charles H. Leland, M.D.

Leonard Moss Hospital, Homœopathic Department, Natick, Mass. We have been unable to obtain any report from this hospital this year.

Morton Hospital, Homœopathic Department, Taunton, Mass. Incorporated 1888. Opened for patients 1888. Number of beds, 20. Number of patients treated last year, 290. Value of hospital property, $50,000. Supported by pay of patients and voluntary contributions. Delegate, Joseph W. Hayward, M.D. "This hospital has been successfully run for fifteen years with the two schools treating patients side by side, without a word or thought of trouble."

Westboro Insane Hospital, Westboro, Mass. Incorporated 1884. Opened for patients 1886. Executive Officer, George S. Adams, M.D., Westboro, Mass. Number of beds, 750. Number of patients treated the past year, 998. Value of hospital property, $547,000. Supported by State appropriation, products from farm, pay of private patients. Delegate, George S. Adams, M.D.

MICHIGAN

Union Benevolent Association Hospital, Homœopathic Department, Grand Rapids, Mich. Incorporated 1873. Opened for patients 1886. Number of beds, 50. Value of hospital property, $68,000. "Physicians of both schools are in attendance at this hospital." Delegate, Maria W. Norris, M.D.

Lakeland Private Hospital, Grosse Point, Mich. We have been unable to obtain any report from this hospital this year.

State Asylum, Ionia, Mich. Not incorporated. Opened for patients 1885. Executive Officer, Oscar R. Long, M.D., Lock Box 39, Ionia, Mich. Number of beds, 400. Number of patients treated the past year, 313. Value of hospital property, $300,000. Supported by State and County appropriations. Delegate, Oscar R. Long, M.D.

Borgess Hospital, Homœopathic Department, Kalamazoo, Mich. Not incorporated. Opened for patients 1896. Number of beds, 40. Attending physician, James N. Ayres, M.D., Kalamazoo, Mich. "This hospital is open to physicians of all schools of practice."

MINNESOTA

Fergus Falls State Hospital for the Insane, Fergus Falls, Minn. Incorporated 1887. Opened for patients 1890. Executive Officer, George O. Welch, M.D., Fergus Falls, Minn. Number of beds, 1,450. Number of patients treated the past year, 1,706. Value of hospital property, $1,000.000. Supported by Legislative appropriation. Delegate, George O. Welch, M.D.

Maternity Hospital, Minneapolis, Minn. Incorporated 1887. Opened for patients 1886. Executive Officer, Martha G. Ripley, M.D., 40 Tenth Street, South, Minneapolis, Minn. Number of beds, 20. Number of patients treated the past year, 202. Value of hospital property, $20,000. Supported by pay from patients, and voluntary contributions. Delegate, Martha G. Ripley, M.D. "This hospital is strictly Homœopathic in its practice, and has been so from the commencement, with wonderful success in curing its patients."

Cobb Hospital, St. Paul, Minn. Not incorporated. Opened for patients 1902. Executive Officer, S. G. Cobb., M.D., 2056 Inglehart Street, St. Paul, Minn. Number of beds, 12. Number of patients treated the past year, 62. Supported by pay of patients.

MONTANA

Dr. Blackburn's Hospital, Butte, Mont. Not incorporated. Opened for patients 1892. Executive Officer, George E. Blackburn, M.D., Butte, Mont. Number of beds, 12. Number of patients treated the past year, 91. Value of hospital property, $10,000. Supported by pay of patients. Delegate, George E. Blackburn, M.D.

NEW JERSEY

Oak Hill, Montclair, N. J. Not incorporated. Opened for patients 1900. Executive Officer, John T. Greenleaf, Oswego, N. Y. Number of beds, 12. Num-

ber of patients treated the past year, 21. Value of hospital property, $21,000. Supported by pay of patients. Delegate, John T. Greenleaf, M.D.

Dr. Bunn's Private Hospital, East Orange, N. J. Not incorporated. Opened for patients 1899. Executive Officer, Frank C. Bunn, M.D., East Orange, N. J. Number of beds, 5. Number of patients treated the past year, 45. "This is a private hospital for the accommodation of operative cases. Most of the operations performed are those of laparatomy." Delegate, Frank C. Bunn, M.D.

NEW YORK

Prospect Heights Hospital and Brooklyn Maternity and New York State School for Training Nurses, Brooklyn, N. Y. Incorporated 1871. Opened for patients 1871. Executive Officer, Mrs. George F. Demarest, 459 Greene Avenue, Brooklyn, N. Y. Number of beds, 70. Value of hospital property, $60,000. Supported by pay of private patients and voluntary subscriptions.

Brooklyn Nursery and Infants' Hospital, Brooklyn, N. Y. Incorporated 1871. Opened for patients 1871. Executive Officer, Mrs. Clara J. Patterson, 33 Monroe Place, Brooklyn, N. Y. Number of beds, 125. Number of patients treated the past year, 230. Value of hospital property, $55,000. Supported by City appropriations, donations, legacies, etc. Delegate, F. E. Risley, M.D.

Lexington Heights Hospital, Buffalo, N. Y. Incorporated 1891. Opened for patients 1890. Executive Officer, DeWitt G. Wilcox, M.D., 584 West Ferry Street, Buffalo, N. Y. Number of beds, 15. Number of patients treated the past year, 167. Value of hospital property, $26,000. Supported by pay of patients. Delegate, DeWitt G. Wilcox, M.D.

Railroad Men's Hospital, Buffalo, N. Y. Number of beds, 15. Executive Officer, William H. Marcy, M.D., 1148 Main Street, Buffalo, N. Y.

Geneva Hygienic Institute, Geneva, N. Y. Not incorporated. Opened for patients 1854. Executive Officer, James C. Knapp, M.D., Geneva, N. Y. Number of beds, 70. Value of hospital property, $30,000. Supported by pay of patients. Delegate, James C. Knapp, M.D.

Gowanda State Homœopathic Hospital, Gowanda, N. Y. Incorporated 1895. Opened for patients 1898. Executive Officer, Daniel H. Arthur, M.D., Gowanda, N. Y. Number of beds, 650. Number of patients treated the past year, 433. Value of hospital property, $700,000. Supported by State appropriation and pay of patients. Delegate, Daniel H. Arthur, M.D.

W. C. A. Hospital, Jamestown, N. Y. Executive Officer, Francis D. Ormes, M.D., Jamestown, N. Y. Number of beds, 25.

Middletown State Homœopathic Hospital, Middletown, N. Y. Incorporated 1870. Opened for patients 1874. Executive Officer, Maurice C. Ashley, M.D., State Hospital, Middletown, N. Y. Number of beds, 1,316. Number of patients treated the past year, 1,459. Value of hospital property, $1,138,000. Supported by State appropriation and pay of patients. Delegate, Maurice C. Ashley, M.D.

New York Ophthalmic Hospital, New York, N. Y. Incorporated 1853. Opened for patients 1852. Executive Officer, James Worrall Arthur, 111 Liberty Street, New York City. Number of beds, 70. Number of patients treated the past year, 881. Value of hospital property, $100,000. Supported by voluntary contributions. Delegate, Frank H. Boynton, M.D.

Glenmary, Owego, N. Y. Incorporated 1897. Opened for patients 1889. Executive Officer, John T. Greenleaf, M.D., Owego, N. Y. Number of beds, 50. Number of patients treated the past year, 61. Value of hospital property, $110,000. Supported by pay of patients. Delegate, John T. Greenleaf, M.D.

The Lee Private Hospital, Rochester, N. Y. Not incorporated. Opened for patients 1898. Executive Officer, John M. Lee, M.D., 179 Lake Avenue, Rochester, N. Y. Number of beds, 51. Number of patients treated the past year, 425. Value of hospital property, $166,000. Supported by pay of patients. Delegate, John M. Lee, M.D. "During the last year the capacity of the hospital has been doubled by the addition of another building."

Yonkers Homœopathic Hospital and Maternity, Yonkers, N. Y. Incorporated 1896. Opened for patients 1896. Executive Officer, Mrs. Joseph F. Waller, Mill Square Road, Yonkers, N. Y. Number of beds, 30. Number of patients treated the past year, 293. Value of hospital property, $35,000. Supported by voluntary contributions and pay of patients. Delegate, R. Oliver Phillips, M.D.

OHIO

Maternity Hospital, Cleveland, Ohio. Incorporated 1892. Opened for patients 1892. We have been unable to obtain any report from this hospital this year. The Executive Officer last year was Mrs. H. A. Everett, Cleveland, Ohio, and the attending physician was Martha E. Stone, M.D.

Chillicothe Emergency Hospital, Homœopathic Department, Chillicothe, Ohio. Incorporated 1898. Opened for patients 1898. Number of beds, 8. Value of hospital property, $5,000. Supported by private contributions and pay of patients. Delegate, Charles Hoyt, M.D. "Physicians of every school of practice give their services to assist in carrying on the work."

Dorcas Invalid's Home for Incurables, Cleveland, Ohio. Incorporated 1885. Opened for patients 1865. Executive Officer, Mrs. T. K. Dissette, St. Clair Street, Cleveland, Ohio. Number of beds, 45. Number of patients treated the past year, 56. Value of hospital property, $100,000. Supported by membership and honorary fees, voluntary contributions, bequests. Delegate, Gaius J. Jones, M.D. "The Dorcas Invalid's Home is non-sectarian. The work was organized as a help to hospitals after the war and later as a basket brigade to help the poor. By accident a few invalids came under their care, and later they took up the Invalid's Home work and ceased the visiting, as other societies took that up. We care for patients for life. The Home is kept in fine order, and the family have every comfort, but few luxuries. We endeavor to make it a 'home,' not merely an institution."

Sixth Avenue Private Hospital, Columbus, Ohio. Not incorporated. Opened for patients 1896. Executive Officer, Maurice P. Hunt, Columbus, Ohio. Number of beds, 14. Number of patients treated the past year, 107. Value of hospital property, $25,000. Supported by pay of patients. Delegate, Maurice P. Hunt, M.D. "This is strictly a private hospital."

Dr. Barnhill's Private Hospital, Findlay, Ohio. Not incorporated. Opened for patients 1894. Executive Officer, Tobias G. Barnhill, M.D., Findlay, Ohio. Number of beds, 20. Number of patients treated the past year, 95. Value of hospital property, $35,000. Supported by pay of patients.

PENNSYLVANIA

F. Lewis Crozer Home for Incurables, Chester, Pa. Incorporated 1899. Opened for patients 1900. Executive Officer, Miss Katherine Ubil, Superintendent, Home for Incurables, Chester, Pa. Number of beds, 40. Number of patients treated the past year, 30. Value of hospital property, $150,000. Supported by an endowment fund by F. Lewis Crozer. Delegate, Daniel F. Maddux, M.D. "The Hospital in connection with the Home is now completed, and will be opened in July, 1903."

B. F. Betts' Private Hospital, Philadelphia, Pa. Not incorporated. Opened for patients 1898. We have been unable to obtain any report from this hospital this year. The Executive Officer last year was A. W. Yale, M.D., 1901 Park Avenue, Philadelphia, Pa. Number of beds, 10.

Bushrod James Eye and Ear Institution, Philadelphia, Pa. Incorporated 1892. Opened for patients 1892. Executive Officer, Emil P. Albrecht, Philadelphia, Pa. Number of beds, 12. "After the death of Dr. James it was found that his will provided for a similar Institute to be conducted under the care of the Board of City Trusts of the City of Philadelphia, and as no provision was made for the continuing the work of the existing Institution the work was necessarily brought to a close. As soon as something definite is known the old Institute will either surrender its charter or continue its work under some other arrangements. The Board of City Trusts has not yet signified whether it will take the trust or not, consequently the new Institute has not yet been brought into being."

Logan Square Hospital, Homœopathic Department, Philadelphia, Pa. Number of beds, 20. "This is a private hospital, and the patients are permitted to have the physician of their own choice, without any regard to what school of practice they may desire to have."

Protestant Home for Incurables, Homœopathic Department, Pittsburg, Pa. Incorporated 1883. Opened for patients 1885. Executive Officer, Mrs. A. Long, 236 Shady Avenue, Pittsburg, Pa. Number of beds, 60. Number of patients treated the past year, 80. Value of hospital property, $100,000. Supported by

endowments, admission fee, and voluntary contributions. Delegate, James H. Thompson, M.D., Smith Block, Pittsburg, Pa.

RHODE ISLAND

Channing Hospital, Providence, R. I. "This hospital is open to physicians of all schools as a place where they may treat their own patients."

Whitmarsh Private Hospital, Providence, R. I. Not incorporated. Opened for patients 1895. Executive Officer, Henry A. Whitmarsh, M.D., 63 Jackson Street, Providence, R. I. Number of beds, 8. All private rooms. Number of patients treated the past year, 66. "This hospital is for surgical cases only." Delegate, Henry A. Whitmarsh, M.D.

TEXAS

Santa Rosa Infirmary, San Antonio, Texas. This infirmary is under the management of Sisters of Charity of the Incarnate Word. It is located in West Houston Street, San Antonio, Texas. Not incorporated. Opened for patients 1869. Number of beds, 200.

HOMŒOPATHIC SANITARIUMS

CALIFORNIA

Homœopathic Sanitarium, San Francisco, Cal. Not incorporated. Opened for patients 1896. Executive Officer, George H. Palmer, M.D., 606 Sutter Street, San Francisco, Cal. Number of beds, 45. Number of patients treated the past year, 465. The property occupied by this institution is rented. Supported by pay of patients.

Dr. F. H. Bang's Sanitarium for Gynæcological and Rectal Surgery, San Jose, Cal. Executive Officer, Frederick H. Bang, M.D., San Jose, Cal.

CONNECTICUT

Elmcroft, Enfield, Conn. Not incorporated. Opened for patients 1890. Executive Officer, Edwin Smith Vail, M.D., Enfield, Conn. Number of beds, 30. Number of patients treated last year, 63. Value of hospital property, $50,000. Supported by pay of patients and products of farm. "Nervous and mental diseases are the only ones treated." Delegate, Edwin S. Vail, M.D.

Crest View Sanitarium, Greenwich, Conn. Not incorporated. Opened for patients 1894. Executive Officer, Henry M. Hitchcock, M.D., Greenwich, Conn. Number of beds, 30. Number of patients treated the past year, 65. Value of hospital property, $50,000. Supported by pay of patients.

E. A. Styles' Sanitarium, New Britain, Conn. Not incorporated. Opened for patients 1896. Executive Officer, E. L. Styles, M.D., New Britain, Conn. Number of beds, 20. Number of patients treated last year, 310. Value of hospital property, $50,000. Supported by pay of patients. Delegate, E. L. Styles, M.D.

Dr. Givens' Sanitarium, Stamford, Conn. Not incorporated. Opened for patients 1891. Executive Officer, Amos J. Givens, M.D., Stamford, Conn. Number of beds, 225. Value of hospital property, $100,000. Supported by pay of patients. Delegate, Amos J. Givens, M.D. "This Sanitarium is arranged on the cottage plan."

Grey Towers, Stamford, Conn. Incorporated 1892. Opened for patients 1893. Executive Officer, Frank H. Barnes, M.D., Stamford, Conn. Number of beds, 50. Number of patients treated last year, 109. Value of hospital property, $50,000. Supported by pay of patients. Delegate, Frank H. Barnes, M.D.

ILLINOIS

The Kelso Sanitarium, Bloomington, Ill. Not incorporated. Opened for patients 1894. Executive Officer, George B. Kelso, M.D., Bloomington, Ill. Number of beds, 25. Number of patients treated the past year, 106. Value of hospital property, $25,000. Supported by pay of patients. "A private institution devoted to surgical and chronic diseases."

Skiles' Orificial Sanitarium, Chicago, Ill. Incorporated 1898. Opened for patients 1894. Executive Officer, Hugh P. Skiles, M.D., 963 West Monroe Street, Chicago, Ill.

West Chicago Sanitarium, Chicago, Ill. Incorporated 1892. Opened for patients 1892. Executive Officer, Mark M. Thompson, M.D., 805 Monroe Street, Chicago, Ill. Number of beds, 10. Number of patients treated the past year, 108. Value of hospital property, $50,000. Supported by pay of patients. Delegate, Mark M. Thompson, M.D. "This is strictly a Homœopathic institution for the treatment of all kinds of surgical and medical cases."

Garfield Park Sanitarium, Chicago, Ill. Executive Officer, Frank Brannin, M.D., 961 West Monroe Street, Chicago, Ill.

Rogers' Sanitarium, Chicago, Ill. Executive Officer, L. D. Rogers, M.D., 441 Dearborn Avenue, Chicago, Ill.

Enos' Sanitarium, Alton, Ill. Executive Officer, William H. Enos, M.D., Alton, Ill. Number of beds, 12.

INDIANA

Dr. B. F. Bye's Sanitarium, Indianapolis, Ind. Not incorporated. Opened for patients 1896. Executive Officer, B. F. Bye, M.D., Indianapolis, Ind.

Indiana Mineral Springs Sanitarium, Homœopathic Department, Attica, Ind. Executive Officer, E. M. McAffee, M.D., Attica, Ind.

IOWA

Iowa State Sanitarium, Marshalltown, Iowa. Incorporated 1895. Opened for patients 1895. Executive Officer, I. Wickliff Bouldin, Marshalltown, Iowa.

The Drake Sanitarium, Des Moines, Iowa. Incorporated 1889. Opened for patients 1889. Executive Officer, Joseph H. Drake, M.D., 826 West Fourth Street, Des Moines, Iowa. "This Sanitarium is temporarily closed in consequence of the sickness of Dr. Drake. He hopes to start it again in the near future."

MARYLAND

Baltimore Homœopathic Sanitarium, Baltimore, Md. Not incorporated. Opened for patients 1893. Executive Officer, Flora A. Brewster, M.D., 1221 Madison Avenue, Baltimore, Md. Number of beds, 6. Number of patients treated the past year, 76. Value of hospital property, $25,000. Supported by pay of patients. Delegate, Flora A. Brewster, M.D.

Barnard's Sanitarium, Baltimore, Md. Incorporated 1900. Opened for patients 1900. Executive Officer, James S. Barnard, M.D., 2724 North Charles Street, Baltimore, Md. Number of beds, 35. Number of patients treated the past year, 260. Value of hospital property, $75,000. Supported by pay of patients. Delegate, James S. Barnard, M.D.

Dr. E. Z. Cole's Sanitarium, Baltimore, Md. Not incorporated. Opened for patients 1896. Executive Officer, Edward Z. Cole, M.D., 1534 Mount Royal Avenue, Baltimore, Md. Number of beds, 10. Number of patients treated the past year, 85. Value of hospital property, $15,000. Supported by pay of patients. Delegate, Edward Z. Cole, M.D. "This is a private sanitarium, of limited capacity, where abdominal gynæcological and orificial cases can receive proper surgical treatment."

Dr. Irving Miller's Sanitarium, Baltimore, Md. Not incorporated. Opened for patients 1895. Executive Officer, Irving Miller, M.D., 1734 St. Paul Street, Baltimore, Md. Number of beds, 25. Value of hospital property, $20,000. Supported by pay of patients.

Carroll Springs Sanitarium, Forest Glen, Md. Not incorporated. Opened for patients 1887. Executive Officer, George H. Wright, M.D., Forest Glen, Md. Number of beds, 40. Number of patients treated the past year, 126. Value of hospital property, $50,000. Supported by pay of patients.

MASSACHUSETTS

Dr. Douglass' Sanitarium, 321 Centre Street, Dorchester, Mass. Incorporated 1892. Opened for patients, 1892. Number of beds, 23. Executive Officer, Charles J. Douglass, M.D., 321 Centre Street, Dorchester, Mass. "Special attention paid to alcoholism and other drug addictions. Any case will be received which is not contagious or insane."

Framingham Nervine, Framingham, Mass. Not incorporated. Opened for patients 1896. Executive Officer, Ellen L. Keith, M.D., Framingham, Mass. Number of beds, 24. Number of patients treated last year, 40. Value of hospital

property, $24,000. Supported by pay of patients. Delegate, Ellen L. Keith, M.D. "Good nourishing food, much out-of-door life, time being spent in a way to interest and occupy the mind by drives, walks, games, or in gardening; various home pursuits, reaching beyond the individual's personal feelings, leading each to do for others in many ways, either in charity or friendship, a natural mingling with the outside public, so far as each was able, or rest and isolation when required, have been some of the means used. To these have been added medical treatment, careful nursing, baths and massage, as seemed indicated."

Woodside Cottage, Framingham, Mass. Not incorporated. Opened for patients 1900. Executive Officer, Frank W. Patch, M.D., Framingham, Mass. Number of beds, 6. Number of patients treated the past year, 25. Value of hospital property, $10,000. Supported by pay of patients. Delegate, Frank W. Patch, M.D. "Woodside Cottage receives chronic cases only, mainly functional diseases. The treatment is strictly and purely Homœopathic."

Newton Sanitarium, West Newton, Mass. Not incorporated. Opened for patients 1902. Executive Officer, N. Emmons Paine, M.D., West Newton, Mass. Number of beds, 12. Value of hospital property, $15,000. Supported by pay of patients. Delegate, N. Emmons Paine, M.D. "Heretofore the 'Newton Sanitarium' has consisted of a number of private residences where patients were received; now a new brick building has been erected, furnished in the best possible manner, where Nauheim and other baths, electricity, massage, etc., are given. No insane cases are received in it."

Newton Nervine, West Baden, Mass. Not incorporated. Opened for patients 1892. Executive Officer, N. Emmons Paine, M.D., West Newton, Mass. Number of beds, 18. Number of patients treated the past year, 51. Value of hospital property, $57,000. Supported by pay of patients. Delegate, N. Emmons Paine, M.D. "The Nervine comprises three buildings specially prepared for the treatment of nervous and mild mental cases."

Massachusetts State Sanitarium, Homœopathic Department, Rutland, Mass. Incorporated 1895. Opened for patients 1898. Executive Officer, Walter J. Marcley, Superintendent, Rutland, Mass. Number of beds. Number of patients treated the past year in Homœopathic department, 275. It is a State Institution. Supported by State appropriation and pay of patients. Delegate, Herbert C. Clapp, M.D. "This Sanitarium is for the treatment of tuberculosis cases. Of all the cases in the Homœopathic department, there were apparently cured or arrested 50 per cent.; improved, including much improved, 45 per cent.; not improved, including worse, 4½ per cent. During the year no alcohol and no cod liver oil have been used in the Homœopathic department, and a still larger experience warrants the assertion that their use is not a necessity in the successful treatment of tuberculosis."

Locust Grove Sanitarium, Sandwich, Mass. Incorporated 1895. Opened for patients 1886. Executive Officer, Miss Alice R. Cooke, Sandwich, Mass. Number of beds, 6. Number of patients treated the past year, 6. Value of hospital property, $3,000. Supported by pay of patients. Delegate, George E. White, M.D.

Buscall's Sanitarium, Springfield, Mass. Not incorporated. Opened for patients 1890. Executive Officer, Isaac Buscall, M.D., 235 Pine Street, Springfield, Mass. Number of beds, 12.

Wellesley Nervine, Wellesley, Mass. Not incorporated. Opened for patients 1897. Executive Officer, Edward H. Wiswall, M.D., Wellesley, Mass. Number of beds, 15. Number of patients treated the past year, 41. Value of hospital property, $27,000. Supported by pay of patients. "There have been special cottages prepared for all those who require isolation in the treatment of their mental disease."

The Pines, Worcester, Mass. Not incorporated. Opened for patients 1900. Executve Officer, H. A. Gibbs, M.D., Worcester, Mass. Number of beds, 15. Number of patients treated the past year, 48. Value of hospital property, $20,000. Delegate, H. A. Gibbs, M.D.

MICHIGAN

Reed City Sanitarium and Private Hospital, Reed City, Mich. Not incorporated. Opened for patients 1895. Executive Officer, Andrew B. Spinney, M.D., Reed City, Mich. Number of beds, 70. Number of patients treated the past year, it is unable to tell, as the records were destroyed. Value of hospital prop-

erty, $30,000. Supported by fees from patients. Delegate, Andrew B. Spinney, M. D. "The Sanitarium was destroyed by fire December 13th, 1902, and all of the records were destroyed. Are now in small rooms, taking care of a few patients. Expect to build again next year."

MINNESOTA

Lawrence Sanitarium, Minneapolis, Minn. Not incorporated. Opened for patients 1892. Executive Officer, William D. Lawrence, M.D., 1000 First Avenue, South, Minneapolis, Minn. Number of beds, 20.

MISSOURI

Dr. Coe's Sanitarium, Kansas City, Mo. Executive Officer, Charles M. Coe, M.D., Eleventh and Walnut Streets, Kansas City, Mo. Number of beds, 50. "This is a private Sanitarium."

MONTANA

Kellogg Sanitarium, Helena, Mont. Incorporated 1894. Opened for patients 1895. Executive Officer, Edwin S. Kellogg, M.D., Helena, Mont. Number of beds, 17. Number of patients treated the past year, 467. Value of hospital property, $15,000. Supported by pay of patients. "This is a strictly private Sanitarium; surgical diseases of women mostly treated."

NEBRASKA

Dr. Benjamin F. Bailey Sanitarium, Lincoln, Neb. Incorporated 1901. Opened for patients 1901. Executive Officer, Benjamin F. Bailey, M.D., 141 South Twelfth Street, Lincoln, Neb. Number of beds, 40. Number of patients treated the past year, 156. Value of hospital property, $60,000. Supported by pay of patients. Delegate, Benjamin F. Bailey, M.D. "A remarkably prosperous year."

NEW JERSEY

Galen Hall, Atlantic City, N. J. Incorporated 1900. Opened for patients 1895. Executive Officer, William T. Moore, Atlantic City, N. J. Number of beds, 150. Delegate, John R. Fleming, M.D. Value of hospital property, $200,000. Supported by pay of patients.

Lakewood Sanitorium, Lakewood, N. J. Not incorporated. Opened for patients 1885. Executive Officer, H. H. Cate, M.D., Lakewood, N. J. Number of beds, 20.

Brookside Retreat, Plainfield, N. J. Incorporated 1891. Opened for patients 1889. Executive Officer, Justus H. Cooley, M.D., 122 Westervelt Avenue, Plainfield, N. J. Number of beds, 25.

Plainfield Sanitarium, Plainfield, N. J. Not incorporated. Opened for patients 1879. Executive Officer, Justus H. Cooley, M.D., 122 Westervelt Avenue, Plainfield, N. J. Number of beds, 22.

NEW YORK

Muncie Seaside Sanitarium, Babylon, Long Island, N. Y. Not incorporated. Opened for patients 1895. Executive Officer, A. E. Muncie, 119 Macon Street, Brooklyn, N. Y. Number of beds, 100. Number of patients treated the past year, 256. Value of hospital property, $25,000. Supported by pay of patients. Delegate, Limbie H. Muncie, M.D.

Bethesda Sanitarium, Brooklyn, N. Y. Incorporated 1894. Opened for patients 1894. Executive Officer, Mrs. Howard M. Smith, 35 McDonough Street, Brooklyn, N. Y. Number of beds, 25. Number of patients treated the past year, 49. Value of hospital property, $20,000. Supported by private subscriptions and board of patients. Delegate, Harry G. Preston, M.D.

The Eden Sanitarium, Main and Glenn Avenues, Sea Cliff, N. Y. Executive Officer, Samuel Eden, M.D., Sea Cliff, N. Y., and 1340 Bushwick Avenue, Brooklyn, N. Y.

Muncie Sanitarium, Brooklyn, N. Y. Not incorporated. Opened for patients 1892. Executive Officer, Edward H. Muncie, M.D., 119 Macon Street, Brooklyn, N. Y. Number of beds, 20. Number of patients treated the past year, 309. Value of hospital property, $60,000. Supported by pay of patients. Delegate, Edward H. Muncie, M.D.

Willis Sanitarium, Brooklyn, N. Y. Not incorporated. Opened for patients 1895. Executive Officer, Miss E. E. Ward, 1453 Pacific Street, Brooklyn, N. Y. Number of beds, 30.

Riverview, Fiskill-on-Hudson. Opened for patients 1870. Executive Officer, Alvin DeWitt Wadsworth, M.D., Fiskill-on-Hudson, N. Y. Number of beds, 15. Number of patients treated the past year, 25. "This Sanitarium is for the care and treatment of mild mental and nervous diseases, and for opium and alcoholic habitues.

Interpines Sanitarium, Goshen, N. Y. Incorporated 1890. Opened for patients 1890. Executive Officer, Frederick W. Seward, M.D., Goshen, N. Y. Number of beds, 56. Number of patients treated the past year, 96. Value of hospital property, $50,000. Supported by pay of patients. Delegate, Frederick W. Seward, M.D.

Liberty Homœopathic Sanitarium for Tuberculosis, Liberty, N. Y. Not incorporated. Opened for patients 1898. Executive Officer, Howard Percy Deady, M.D., Liberty, N. Y. Number of beds, 30. We have been unable to obtain any report from this hospital this year.

Wild's Sanitarium, Rochester, N. Y. Executive Officer, George W. Wild, M.D., 259 Central Avenue, Rochester, N. Y.

Ayres' Homœopathic Sanitarium, Saratoga Springs, N. Y. Not incorporated. Opened for patients 1888. Executive Officer, Emma F. M. Ayres, M.D., 69 Caroline Street, Saratoga Springs, N. Y. Number of beds, 8.

OHIO

Dr. C. E. Sawyer Sanitarium, Marion, Ohio. Incorporated 1900. Opened for patients 1895. Executive Officer, Charles E. Sawyer, M.D., Marion, Ohio. Number of beds, 100. Number of patients treated the past year, 325. Value of hospital property, $125,000. Supported by pay of patients. Delegate, Charles E. Sawyer, M.D.

Worthington Sanitarium, Worthington, Ohio. Executive Officer, Sylvester W. Beall, M.D., Worthington, Ohio. Number of beds, 25.

PENNSYLVANIA

Easton Sanitarium, Easton, Pa. Incorporated 1894. Opened for patients 1894. Executive Officer, C. Spencer Kinney, M.D., Easton, Pa. Number of beds, 27. Number of patients treated the past year, 38. Value of hospital property, $38,000. Supported by pay of patients. Delegate, C. Spencer Kinney, M.D.

The Philadelphia Sanitarium, Philadelphia, Pa. Not incorporated. Opened for patients 1899. Executive Officer, A. N. Gale, 1901 Park Avenue, Philadelphia, Pa. Number of beds, 6. "This is a private hospital for the treatment of nervous and surgical cases under the care of their own physician."

The Walter Sanitarium, Walter Park, Pa. Not incorporated. Opened for patients 1877. Executive Officer, Robert Walter, M.D., Walter Park, Pa. Number of beds, 150. Number of patients treated the past year, 1,009. Value of hospital property, $200,000. Supported by pay of patients and guests. Delegate, Robert Walter, M.D.

VERMONT

The Sparhawk Sanitarium, Burlington, Vt. Not incorporated. Opened for patients 1887. Executive Officer, George E. E. Sparhawk, M.D., Burlington, Vt. ber of beds, 150. Number of patients treated the past year, 1,009. Value of hospital property, $40,000. Supported by fees of patients. Delegate, George E. E. Sparhawk, M.D.

WISCONSIN

Albany Sanitarium, Albany, Wis. Not incorporated. Opened for patients 1896. Executive Officer, Lena M. Whitcomb, M.D., Albany, Wis. Number of beds, 10. Number of patients treated the past year, 25. Value of hospital property, $12,000. Supported by pay of treatment.

Pennoyer Sanitarium, Kenosha, Wis. Incorporated 1889. Opened for patients 1890. Executive Officer, Nelson A. Pennoyer, M.D., Kenosha, Wis. Number of beds, 100.

INSTITUTIONS UNDER HOMOEOPATHIC TREATMENT.

ARIZONA.

Indian School, Phœnix, Arizona. Attending physician, Charles D. Belden, M.D., Phœnix, Arizona. We have been unable to obtain any report from this institution this year.

CALIFORNIA

Masonic Home, De Coto, Cal. Incorporated 1892. Opened for inmates 1899. Executive Officer, Charles S. Patton, San Francisco, Cal. Number of beds, 200. Value of institution property, $250,000. Supported by per capita tax of one dollar per year upon all California Masons. Delegate, J. R. Aiken, M.D., De Coto, Cal.

Protestant Orphan Asylum, Sacramento, Cal. Incorporated 1887. Opened for inmates 1867. Executive Officer, Mrs. Jennie Cady Morgan, Sacramento, Cal. Number of beds, 155. Number of patients treated the past year, 66. Value of institution property, $100,000. Supported by State appropriation, and some revenue from friends of inmates.

Sacramento Foundling Home, Sacramento, Cal. Incorporated 1890. Opened for inmates 1895. Executive Officer, Mrs. William Rider, 1629 F. Street, Sacramento, Cal. Number of beds, 74.

Armitage Home, San Mateo, Cal. Executive Officer, L. A. Wadham, 530 California Street, San Francisco, Cal. Number of beds, 200.

Maria Kip Orphanage, San Francisco, Cal. Incorporated 1890. Opened for inmates 1890. Executive Officer, Miss Carrie Gwin, 2524 Washington Street, San Francisco, Cal. Number of beds, 125. Value of institution property, $75,000. Supported by State aid and individual subscriptions. Delegate, Florence N. Ward, M.D.

San Francisco Nursery for Homeless Children, San Francisco, Cal. Incorporated 1892. Opened for inmates 1878. Executive Officer, Mrs. Guy E. Manning, 3675 Clay Street, San Francisco, Cal. Number of beds, 75. Number of patients treated the past year, 341. Value of institution property, $15,000. Supported by charity and State aid for orphans and half-orphans. Delegate, Guy E. Manning, M.D. "Our general run of ailments this year was varied by the appearance of a severe case of diphtheria, which required the constant attention of the attending physician for thirty-six hours, the child being on the verge of dissolution for that length of time, but perfect recovery finally taking place. No other child out of the seventy-five contracted the disease. Not even whooping cough, mumps nor chicken-pox, those disagreeable features of childhood, have marred our equanimity for the past twelve months. Measles have also been tabooed this year."

COLORADO

Belle Lenox Nursery, Denver, Col. Incorporated 1898. Opened for inmates 1898. Executive Officer, Mrs. Dean Peck, 1175 South Fifteenth Street, Denver, Col. Number of beds, 52. Number of patients treated the past year, 215. Value of institution property, $15,000. Supported by charity. Delegate, J. P. Willard, M.D.

The Haven Training School for Girls, Denver, Col. Incorporated 1898. Opened for inmates 1896. Executive Officer, Mrs. Dean Peck, 1175 South Fifteenth Street, Denver, Col. Number of beds, 60. Number of patients treated last year, 56. Supported by charity. Delegate, J. P. Willard, M.D. "This is not a hospital, but an Industrial School for Girls of from twelve to eighteen years of age."

Denver Orphan's Home, Denver, Col. Incorporated 1880. Opened for inmates 1881. Executive Officer, Mrs. Olive C. Kassler, 1136 Logan Avenue, Denver, Col. Number of beds, 162. Number of patients treated the past year, 347. Value of Institution property, $50,000. Supported by membership fees, associated charities, fees from patients.

FLORIDA

Home for the Aged, Jacksonville, Fla. Number of beds, 6. Number of patients treated the past year, 7. Supported by donations and pay of inmates. Henry R. Stout, M.D., attending physician.

ILLINOIS

Chicago Nursery and Half-Orphan Asylum, Chicago, Ill. Incorporated 1865. Opened for inmates 1865. We have been unable to obtain any report from this institution this year.

Chicago Foundling Home for Mothers and Infants, Chicago, Ill. Incorporated 1872. Opened for inmates 1871. Executive Officer, Miss Fannie C. Shipman, 120 South Wood Street, Chicago, Ill. Number of beds, 104. Number of patients treated the past year, 442. Value of institution property, $50,000. Supported by voluntary contributions and a small endowment. Delegate, Clement A. Weirick, M.D.

Illinois Asylum for Feeble Minded Children, Chicago, Ill. Incorporated 1885. Opened for inmates 1885. Executive Officer, William L. Anthon, M.D., Chicago, Ill. Number of beds, 600.

Illinois Masonic Home, Chicago. Incorporated 1887. Opened for inmates 1884. Executive Officer, C. S. Gurney, 878 Monroe Street, Chicago, Ill. Number of beds, 100. Number of patients treated last year, 76. Value of institution property, $110,000. Supported by contributions of Masons in the State of Illinois. Delegate, E. C. Sweet, M.D., 70 State Street, Chicago, Ill.

INDIANA

Old Ladies' Home, New Albany, Ind. Executive Officer, Mrs. Rebecca Culbertson, Louisville, Ky. Number of beds, 14.

IOWA

Home for Aged Women, Cedar Rapids, Iowa. Incorporated 1887. Opened for inmates 1887. Executive Officer, G. T. Averill, President, Cedar Rapids, Iowa. Number of beds, 18. Value of institution property, $15,000. Supported by endowment fund and admission of inmates. Delegate, Charles H. Cogswell, M.D.

Home for the Friendless, Cedar Rapids, Iowa. Incorporated 1886. Opened for inmates 1884. Executive Officer, Emma M. Van Vechten, Cedar Rapids, Iowa. Number of beds, 50. Number of patients treated the past year, 12. Value of institution property, $25,000. Supported by board of inmates and from voluntary subscriptions. Delegate, Charles H. Cogswell, M.D.

Iowa School for the Deaf, Council Bluffs, Iowa. Incorporated 1875. Opened for inmates 1878. Executive Officer, Harvey W. Rothbert, Council Bluffs, Iowa. Number of beds, 350.

Benedict Home, Des Moines, Iowa. Incorporated 1882. Opened for inmates 1882. Attending physician. Jennie M. Coleman, M.D., Des Moines, Iowa. Number of beds, 35. Number of patients treated the past year, 82. Value of institution property, $30,000. Supported by State appropriation and voluntary contributions.

Des Moines Home for Friendless Orphans, Des Moines, Iowa. Incorporated 1887. Opened for inmates 1884. Executive Officer, Mrs. C. E. Rawson, Des Moines, Iowa. Attending physician, Alexander M. Linn, M.D., Des Moines, Iowa.

Home for Aged and Infirm, Des Moines, Iowa. Incorporated 1896. Opened for inmates 1896. Executive Officer, Mrs. Dickenson, Fourth and Centre Streets, Des Moines, Iowa. Number of beds, 35.

Salvation Army Rescue Home, Des Moines, Iowa. Incorporated 1898. Opened for inmates 1899. Attending physician, Jennie M. Coleman, M.D., Des Moines, Iowa. Number of beds, 22. Number of patients treated the past year, 56. Value of institution property, $12,000. Supported by board of inmates and voluntary contributions.

Sioux City Training School for Nurses, Sioux City, Iowa. Incorporated 1894. Opened for inmates 1894. Executive Officer, Mrs. W. Stinson, Sioux City, Iowa. Attending physician, A. Perry Bowman, M.D., Sioux City, Iowa. Number of beds, 45.

KANSAS

Atchison Orphan's Home, Atchison, Kan. We have been unable to obtain any report from this institution this year.

MARYLAND

Baltimore City Jail, Baltimore, Md. Attending physician, James C. Clarke, M.D., 1201 Madison Avenue, Baltimore, Md. We have been unable to obtain any report from this institution this year.

MASSACHUSETTS

Ayer Home for Young Women and Children, Lowell, Mass. Incorporated 1875. Opened for inmates 1875. Executive Officer, Mrs. A. G. Rouviere, 159 Pawtucket Street, Lowell, Mass. Number of beds, 50. Number of patients treated the past year, 29. Value of institution property, $40,000. Supported by endowment and donations. Delegate, G. Forrest Martin, M.D.

Middlesex County House of Correction, East Cambridge, Mass. Attending physician, Edward R. Utley, M.D., Newton, Mass. Number of beds, 330. Number of patients treated the past year, 5,500. Delegate, Edward R. Utley, M.D.

Newton City House of Correction, Newton, Mass. Incorporated 1815. Opened for inmates 1816. Executive Officer, John F. Fairbairn, Newton, Mass. Number of beds, 24. Delegate, Edward R. Utley. M.D.

MICHIGAN

Thompson Home for Old Ladies, Homœopathic Department, Detroit, Mich. Attending physician, Christopher C. Miller, M.D., 31 Winder Street, Detroit, Mich. "This institution is open to all schools of practice."

Michigan State Prison, Jackson, Mich. Incorporated 1839. Opened for inmates 1839. Executive Officer, William Chamberlain, Jackson, Mich. Number of beds, 25.

Michigan Home for Feeble-minded and Epileptics, Lapeer, Mich. Incorporated 1893. Opened for inmates 1895. Executive Officer, William A. Poglase, M.D., Lapeer, Mich. Number of beds, 500. Number of patients treated the past year, 495. Value of Institution property, $300,000. Supported by State appropriations. Delegate, William A. Poglase.

MINNESOTA

Washburne Memorial Asylum, Minneapolis, Minn. Incorporated 1881. Opened for inmates 1886. Executive Officer, Hon. C. E. Faulkner, Minneapolis, Minn. Number of beds, 120. Value of institution property, $180,000. Supported by the bequest of the founder, Hon. Cadwallader C. Washburne, amounting to $484,000.

Sheltering Arms, Minneapolis, Minn. Incorporated 1882. Opened for inmates 1882. We have been unable to obtain any report from this institution this year.

Church Home of Minnesota for Aged and Infirm Women, St. Paul, Minn. Incorporated 1897. Opened for inmates 1896. Executive Officer, Miss Louisa S. Rees, 414 East Fourteenth Street, St. Paul. Minn. Number of beds, 10.

MISSOURI.

Bethel Mission, Kansas City, Mo. Attending physician, Charles S. Elliott, M.D., 1103 Main Street, Kansas City, Mo. We have been unable to obtain any report from this institution this year.

Protestant Home for Aged Women, Kansas City, Mo. Attending physician, Charles S. Elliott, M.D., 1103 Main Street, Kansas City, Mo. We have been unable to obtain any report from this institution this year.

Baptist Orphans' Home, St. Louis, Mo. Incorporated 1883. Opened for inmates 1886. Executive Officer, Mrs. A. H. Filers, 4935 Easton Avenue, St. Louis, Mo. Number of beds, 70. Number of patients treated the past year, 59. Value of institution property, $30,000. Supported by small endowment and voluntary contributions. Attending physician, Carl J. Luyties, M.D. "Our motto is 'God has a home for every friendless child, and our work is to find it.'"

Girl's Industrial Home, St. Louis, Mo. Incorporated 1854. Opened for inmates 1854. We have been unable to obtain any report from this institution this year.

NEW JERSEY

Baptist Home for the Aged, Newark, N. J. Incorporated 1891. Opened for patients 1891. Executive Officer, Mrs. Sutphen, 64 Elizabeth Avenue, Newark,

N. J. Number of beds, 30. Attending physician, Henry J. Anderson, M.D., 4 Orange Place, Newark, N. J.

Home for Aged Women, Newark, N. J. This is non-sectarian both in regard to religion and medicine. Dr. E. D. G. Conkling has attended nine patients during the past year. Physicians of different schools attend the patients. Each inmate has the choice of her own physician."

Old Ladies' Home, Newark, N. J. We have been unable to obtain any report from this institution this year.

Newark Orphan Asylum, Newark, N. J. Attending physician, Henry J. Anderson, M.D., 4 Orange Place, Newark, N. J. We have been unable to obtain any statistics from this institution this year.

Children's Home, Plainfield, N. J. Incorporated 1877. Opened for inmates 1877. Executive Officer, Miss Lucy H. Everett, Plainfield, N. J. Number of beds, 30. Value of institution property, $27,000. Supported by voluntary contributions, and board of children in some cases. Delegate, Edward Rushmore, M.D. "Some adjoining ground to our institution has been purchased, and we expect to enlarge our bulding, thus enabling us to care for more children."

NEW YORK

Albany House of Shelter, Albany, N. Y. Incorporated 1869. Opened for inmates 1868. Executive Officer, Samuel S. Hatt, 86 State Street, Albany, N. Y. Number of beds, 23.

Ingleside Home, Buffalo, N. Y. Attending physician, William H. Marcy, M.D., 1148 Main Street, Buffalo, N. Y. We have been unable to obtain any report from this institution this year.

Martha Wilson Home, Mount Vernon, N. Y. We have been unable to obtain any report from this institution this year.

New York Christian Home for Intemperate Men, Mount Vernon, N. Y. Incorporated 1877. Opened for inmates 1871. Executive Officer, Rev. George S. Avery, Mount Vernon, N. Y. Number of beds, 150. Number of patients treated the past year, 287. Value of hospital property, $70,000. Supported by board of inmates and donations.

Asylum for the Relief of Half Orphan and Destitute Children, New York, N. Y. Incorporated 1835. Opened for inmates 1835. Executive Officer, Mrs. James R. Wheeler, 433 West One Hundred and Seventeenth Street, New York City. Number of beds, 200. Number of patients treated, 92. Attending physician, Alvin M. Woodward, M.D. "It is seldom in the history of the Home that a year has opened with so much sickness as the one whose record has just closed. The first disease to attack the children was that most dreaded one—diphtheria. This was followed by measles, and a little later scarlatina developed. As a complication whooping cough appeared among those convalescing from measles, and in a number of cases both diseases developed at the same time. One of the larger boys had an attack of pericarditis, which gave us a great deal of anxiety until he was out of danger."

Baptist Home for the Aged, Homœopathic Department, New York, N. Y. Incorporated 1869. Opened for inmates 1869. Executive Officer, Mrs. Jacob Hays, 615 Fifth Avenue, New York City. Number of beds, 100. Number of patients treated by the Homœopathic physician, 52. Value of hospital property, $300,000. Supported by the Baptist Churches of the Borough of Manhattan, New York City, and by admission fees of inmates. Attending physician, H. Everett Russell, M.D.

Chapin Home for Aged and Infirm, Homœopathic Department, New York, N. Y. Executive Officer, Mrs. E. T. Sherman, 114 West Forty-fourth Street, New York City. Number of beds, 65. Value of institution property, $150,000. Supported by voluntary contributions and a small endowment fund. Attending physician, John B. Garrison, M.D. "This Home is the only one in the City of New York which does not require some religious qualification or some residence test in order to enter it." Number of patients treated the past year, 25.

Home for the Friendless, New York City. Incorporated 1839. Opened for inmates 1840. Executive Officer, Mrs. Frank S. Evans, 105 East Twenty-second Street, New York City. Number of beds, 226. Number of patients treated the past year, 151. Value of institution property, $270,000. Supported by volun-

tary contributions, legacies, board of children and board of education fund. Delegate, Joseph Foster Land, M.D.

Hospital of Five Points House of Industry, New York, N. Y. Incorporated 1854. Opened for inmates 1854. Executive Officer, William R. Garbutt, 155 Worth Street, New York City. Number of beds, 90. Number of patients treated the past year, 1,138; this number includes the "Out Door" Department. Value of institution property, $350,000. Supported by board of children, City appropriation, and voluntary contributions. Attending physician, H. L. Russell, M.D.

OHIO

Home for Friendless and Foundlings, Cincinnati, Ohio. Incorporated 1860. Opened for inmates 1860. Executive Officer, Mrs. William C. Riles, 2612 Eden Avenue, Cincinnati, Ohio. Number of beds, 51 adults, 41 Infants. Number of patients treated the past year, 260. Supported by endowment fund and voluntary contributions. Delegate, Charles E. Walton, M.D. "There was a change made July 1st, 1902, at which time Dr. Charles D. Crank became Chief-of-Staff."

Eliza Jennings Home, Cleveland, Ohio. Incorporated 1869. Opened for inmates 1868. Executive Officer, Mrs. Charles Pressley, Jr., 1031 East Madison Avenue, Cleveland, Ohio. Number of beds, 26. Number of patients treated the past year, 28. Value of instituion property, $30,000. Supported by an endowment fund of $25,000, and voluntary contributions. Delegate, William E. Trego, M.D. "This is a Home for Incurables, and is a part of the Y. W. C. A. work."

Shelley County Children's Home, Sidney, Ohio. Incorporated 1897. Opened for inmates 1897. Executive Officer, J. H. McCluny, Sidney, Ohio. Number of beds, 45. Number of patients treated last year, 21. Value of institution property, $60,000. Supported by County tax and private contributions. "No death has occurred since the institution was opened, six years ago."

OREGON

Children's Home, Portland, Oregon. Incorporated 1870. Opened for children 1887. Executive Officer, Henry C. Jefferds, M.D., 67 Dekum Building, Portland, Oregon. Number of beds, 100. Value of institution property, $50,000. Supported by endowment fund, State appropriation and voluntary contributions. Delegate, Henry C. Jefferds, M.D.

PENNSYLVANIA

Boy's Boarding House, Allegheny, Pa. Incorporated 1886. Opened for inmates 1870. Executive Officer, Mrs. D. M. Ure, 1017 Western Avenue, Allegheny, Pa. Number of beds, 25. Number of patients treated the past year, 56. Value of institution property, $30,000. Supported by endowment fund and board of boys.

Christian Home for Women, Allegheny, Pa. Incorporated 1868. Opened for inmates 1868. Executive Officer, Mrs. Joseph F. Smith, 728 Euclid Avenue, Pittsburg, Pa. Number of beds, 30. Number of patients treated the past year, 65. Supported by donations.

Convent of Benedictine Sisters, Erie, Pa. Not incorporated. Opened for inmates 1865. Executive Officer, Mother Superior, 322 East Minot Street, Erie, Pa. Number of beds, 10. Number of patients treated the past year, 247. Supported by voluntary contributions. Attending physician, Edward Cranch, M.D.

Florence Home, Scranton, Pa. Incorporated 1893. Opened for inmates 1893. Executive Officer, Mrs. J. L. Crawford, Scranton, Pa. Number of beds, 20. Number of patients treated the past year, 50. Value of institution property, $12,000. Supported by donations. Attending physician, Anna C. Clarke, M.D.

RHODE ISLAND

Sophia Little Home, Homœopathic Department, Edgewood, R. I. Incorporated 1882. Opened for inmates 1882. Executive Officer, Miss Colwell, Norwood Avenue, Edgewood, R. I. Number of beds, 32. Value of institution property, $50,000. Supported by State appropriation and donations. Delegate, Arthur H. Wood, M.D. "Six physicians of each of the two schools of medicine serve one month each in every year."

Children's Friend Society (Tobey Street Home), Providence, R. I. Incorporated 1836. Opened for inmates 1835. Executive Officer, Mrs. Mary A. Talbot,

55 Congdon Street, Providence, R. I. Number of beds (in the hospital), 25. Value of institution property, $65,000. Supported by endowment fund and private subscriptions. Attending physician, Henry M. Sanger, M.D.

Providence Rescue Home and Mission, Providence, R. I. Incorporated 1896. Opened for inmates 1895. Executive Officer, Miss M. H. Dennehy, Providence, R. I. Number of beds, 17. Number of patients treated the past year, 6. Value of institution property, $1,500. Supported by private contributions. "The Home is for the reformation of young women and girls of a hopeful character who are not yet entirely destitute of self-respect."

St. Elizabeth's Home, Providence, R. I. Incorporated 1883. Opened for inmates 1882. Executive Officer, Mrs. James H. Coggeshall, 178 Bowen Street, Providence, R. I. Number of beds, 50. Number of patients treated the past year, 32. Value of institution property, $50,000. Supported by small endowment fund and contributions from the Episcopal Churches and public donations. Delegate, Edward H. Knight, M.D. "Both schools of medicine are represented on the Medical Staff of the Institution."

WISCONSIN

House of Mercy, Homœopathic Department, Milwaukee, Wis. Incorporated 1888. Opened for patients 1888. Executive Officer, Mrs. Julia Kortz, 483 Thirty-fifth Street, Milwaukee, Wis. Number of beds, 50. Value of institution property, $25,000. Supported by voluntary contributions. Attending physician, Solomon D. Johnson, M.D. "Six old school physicians attend six months in each year and six Homœopathic physicians attend the other six months of the year, the service of each physician being one month."

Milwaukee Orphan Asylum, Homœopathic Department, Milwaukee, Wis. Incorporated 1849. Opened for inmates 1850. Executive Officer, Mrs. Ferdinand Meinecke, Milwaukee, Wis. Number of beds, 125. Number of patients treated the past year, in the Homœopathic Department, 55, all of them in the Eye, Ear and Throat Department. Value of institution property, $100,000. Supported by endowment fund and public subscriptions. Delegate, Walter W. Irving, M.D. "Dr. Irving is the only Homœopathic physician on the Medical Staff, and his work is confined exclusively to the Eye, Ear, Nose and Throat patients."

HOMOEOPATHIC DISPENSARIES

ARKANSAS

Little Rock Homœopathic Dispensary, Little Rock, Ark. Attending physician, George V. Thomas, M.D., 516 Main Street, Little Rock, Ark. We have been unable to obtain any report from this dispensary this year.

CALIFORNIA

Pacific Homœopathic Polyclinic, San Francisco, Cal. Incorporated 1899. Opened for patients 1889. Executive Officer, Alice M. Goss, M.D., 606 Sutter Street, San Francisco, Cal. Number of patients treated the past year, 10,501. Number of prescriptions given the past year, 21,034. Delegate, Florence N. Ward, M.D.

DISTRICT OF COLUMBIA

National Homœopathic Hospital Association Dispensary, Washington, D. C. Incorporated 1881. Opened for patients 1881. Executive Officer, Mrs. Henry Wells, "The Richmond," Washington, D. C. Number of patients treated the past year, 8,398. Number of prescriptions given the past year, 9,764. Delegate, John R. Sharp, M.D.

DELAWARE

Homœopathic Free Dispensary, Wilmington, Del. Incorporated 1888. Opened for patients 1888. Executive Officer, Mrs. Emma G. Quigley, 601 West Eighth Street, Wilmington, Del. Number of patients treated the past year, 606. Number of prescriptions made the past year, 3,319. Delegate, Lewis W. Flinn, M.D.

ILLINOIS

Chicago Homœopathic Free Dispensary, Chicago, Ill. Incorporated 1876. Opened for patients 1876. Executive Officer, Milton B. Blouke, M.D., 1222 West Washington Street, Chicago, Ill. Number of patients treated the past year,

1,723. Number of prescriptions given the past year, 4,250. Number of outside visits made the past year, 726. Cost of conducting the Dispensary the past year, $1,000. Delegate, William M. Stearns, M.D.

Dispensary of Hering Medical College, Chicago, Ill. Executive Officer, Henry C. Allen, M.D., 5142 Washington Avenue, Chicago, Ill. No list has been kept of the number of patients treated nor of the number of prescriptions given the past year. Dispensary incorporated 1892. Opened for patients 1892.

Hahnemann College Free Dispensary, Chicago, Ill. Incorporated 1855. Opened for patients 1855. Executive Officer, J. C. Burt, 2811 Cottage Grove Avenue, Chicago, Ill. Number of patients treated the past year, 15,973. Number of prescriptions given the past year, 41,385. Number of outside visits made the past year, 2,513. Cost of conducting the dispensary the past year, $3,497.83. Delegate, Joseph P. Swan, M.D.

Kirk Medical Dispensary, Chicago, Ill. Executive Officer, Henry H. Depew, M.D., 112 Clark Street, Chicago, Ill. "This is a private dispensary and not a free dispensary."

National Free Dispensary, Chicago, Ill. Executive Officer, Paul Burmaster, 441 Dearborn Avenue, Chicago, Ill. We have been unable to obtain any report from this dispensary this year.

Working Women's Free Dispensary, Chicago, Ill. We have been unable to obtain any report from this dispensary for this year.

Englewood Union Hospital and Dispensary, Englewood, Ill. We have been unable to obtain any report from this dispensary for this year.

IOWA

City Free Dispensary of Council Bluffs, Iowa. Not incorporated. Opened for patients 1882. Executive Officer, Miss Mabel C. Becroft, 217 Fourth Street, Council Bluffs, Iowa. Number of patients treated the past year, 86. Number of prescriptions given the past year, 299. Number of outside visits made the past year, 35. Cost of conducting the dispensary the past year, $55. Attending physician, Phineas J. Montgomery, M.D. "This free dispensary is conducted by Dr. Montgomery at his office, and is open every Saturday afternoon for the medical and surgical treatment of the worthy poor."

KENTUCKY

Free Dispensary of Southwestern Homœopathic College, Louisville, Ky. Incorporated 1892. Opened for patients 1892. Number of patients treated the past year, 1,054. Number of prescriptions given the past year, 2,329. Number of outside visits made the past year, 209. Cost of conducting the dispensary the past year, $200. Executive Officer, O. F. Miller, M.D., 1720 Sixth Street, Louisville, Ky.

MARYLAND

Maryland Homœopathic Hospital and Free Dispensary, Baltimore, Md. Incorporated 1890. Opened for patients 1890. Executive Officer, John T. Graham, 223 St. Paul Street, Baltimore, Md. Number of patients treated the past year, 3,507. Number of prescriptions given the past year, 11,865. Number of outside visits made the past year, 4,130. Delegate, Henry J. Evans, M.D.

Southern Homœopathic College Dispensary, Baltimore, Md. Incorporated 1890. Opened for patients 1890. Executive Officer, William Delaney Thomas, M.D., 633 North Carrolton Avenue, Baltimore, Md. Number of patients treated the past year, 3,507. Number of prescriptions given the past year, 11,865. Number of outside visits made the past year, 4,290. Cost of conducting the dispensary the past year, $299.57. Delegate, William Delaney Thomas, M.D.

MASSACHUSETTS

Homœopathic Medical Dispensary, Boston, Mass. Incorporated 1856. Opened for patients 1857. Executive Officer, A. Howard Powers, M.D., 406 Massachusetts Avenue, Boston, Mass. Number of patients treated the past year, 19,017. Number of prescriptions given the past year, 50,773. Number of outside visits made the past year, 11,782. Cost of conducting the dispensary the past year, $5,558.20. Delegate, A. Howard Powers, M.D.

Homœopathic Medical Dispensary, Burroughs Place Branch, Boston, Mass. The statistics for this dispensary are included in those given for the Homœopathic Medical Dispensary. No separate record is kept.

Homœopathic Medical Dispensary, West End Branch, Boston, Mass. The statistics for this dispensary are included in those given for the Homœopathic Medical Dispensary. No separate record is kept.

Lowell Homœopathic Free Dispensary Association, Lowell, Mass. Not incorporated. Opened for patients 1894. Executive Officer, G. Forrest Martin, M.D., 17 Kirk Street, Lowell, Mass. We have been unable to obtain any report from this dispensary this year.

Roxbury Homœopathic Dispensary, Roxbury, Mass. Incorporated 1887. Opened for patients 1887. Executive Officer, William W. Davis, Norfolk House, Roxbury, Mass. Number of patients treated the past year, 3,427. Number of prescriptions given the past year, 13,627. Number of outside visits made the past year, 1,406. Cost of conducting the dispensary the past year, $1,915.54.

Salem Homœopathic Dispensary, Salem, Mass. We have been unable to obtain any report from this dispensary this year.

Worcester Homœopathic Hospital and Dispensary Association, Worcester, Mass. Incorporated 1885. Opened for patients 1880. Executive Officer, Edward A. Fisher, M.D., 25 Elm Street, Worcester, Mass. Delegate, J. Marcus Barton, M.D. "The dispensary has not been open during the past year. We still hold our charter, but do not know when we shall reopen the dispensary."

MICHIGAN

The Grace Hospital Dispensary, Detroit, Mich. Incorporated 1888. Opened for patients 1888. Number of paeients treated the past year, 2,594. Number of prescriptions given the past year, 11,194. Executive Officer, Ransom Gillis, Detroit, Mich.

Free Dispensary of the Detroit Homœopathic Medical College, Third Street and Lafayette Avenue, Detroit, Mich. Not incorporated. Opened for patients 1901. Executive Officer, George W. Augustin, M.D., 469 Third Avenue, Detroit, Mich. Number of patients treated the past year, 906. Number of prescriptions given the past year, 1,490. Number of outside visits made the past year, 380. Delegate, Alfred Graham, M.D.

MINNESOTA

University Homœopathic Free Dispensary, Minneapolis, Minn. Not incorporated. Opened for patients 1888. Executive Officer, Alonzo P. Williamson, Pillsbury Building, Minneapolis, Minn. Number of patients treated the past year, 2,139. Number of prescriptions given the past year, 8,437. Number of outside visits made the past year, 1,008. Cost of conducting the dispensary the past year, $300.00. Delegate, E. S. Mann, M.D.

MISSOURI

Homœopathic Free Dispensary, St. Louis, Mo. Not incorporated. Opened for patients 1878. Executive Officer, James A. Campbell, M.D., 206 Mermod-Jaccard Building, St. Louis, Mo. Number of patients treated the past year, 4,808. Number of prescriptions given the past year, 10,604. Number of outside visits made the past year, 306. Cost of conducting the dispensary the past year, $430.00. Delegate, Willis B. Morgan, M.D.

St. Louis Children's Hospital Dispensary, St. Louis, Mo. Incorporated 1879. Opened for patients 1880. Executive Officer, Charles H. Goodman, M.D., 3329 Washington Avenue, St. Louis, Mo. Number of patients treated last year, 480. Number of prescriptions given the past year, 1,468. Delegate, Charles H. Goodman, M.D.

NEW JERSEY

West Jersey Dispensary and Hospital Association, Camden, N. J. Incorporated 1887. Opened for patients 1887. Executive Officer, George D. Pine, 453 Berkley Street, Camden, N. J. Number of patients treated the past year, 9,760. Number of prescriptions given the past year, 12,208. Number of outside visits made the past year, 3,102. Cost of conducting the dispensary the past year, $500.00. Delegate, Erving M. Howard, M.D. "The hospital, by the addition of adjoining building, has nearly doubled its capacity, and it now open for all

classes of cases (except contagious diseases). It has a resident physician, W. L. Williams, M.D., and is doing a greater amount of work than ever before."

East Orange Dspensary, East Orange, N. J. Incorporated 1883. Opened for patients 1883. Executive Officer, Miss Laura M. Lindsley, 115 Washington Street, East Orange, N. J. Number of patients treated the past year, 476. Number of prescriptions given the past year, 1,194. Cost of conducting the dispensary the past year, $358.27.

The William McKinley Memorial Hospital Dispensary, Trenton, N. J. Incorporated 1887. Opened for patients 1887. Executive Officer, E. S. Davis, Trenton, N. J. Number of patients treated the past year, 2,636. Number of prescriptions given the past year, $9,745.

NEW YORK.

Albany City Homœopathic Hospital and Dispensary, Albany, N. Y. Incorporated 1867. Opened for patients 1867. We have been unable to obtain any report from this dispensary for this year.

Brooklyn Homœopathic Hospital Dispensary, Brooklyn, N. Y. Incorporated 1859. Opened for patients 1859. We have unable to obtain any report from this dispensary this year.

Brooklyn, E. D., Homœopathic Dispensary, Brooklyn, N. Y. Incorporated 1872. Opened for patients 1872. We have been unable to obtain any report from this hospital this year. The executive officer last year was George V. Tompkins, 96 Wilson Street, Brooklyn, N. Y.

Cumberland Street, Homœopathic Hospital Dispensary, Brooklyn, N. Y. Incorporated 1900. Opened for patients 1902. Executive Officer, C. B. Bacon, M.D., Cumberland Street, Hospital, Brooklyn, N. Y. Number of prescriptions given the past year, 4,981. Number of patients treated the past year, 1,524.

Central Homœopathic Dispensary, 298 Howard Avenue, Brooklyn, N. Y. Incorporated 1883. Opened for patients 1883. Executive Officer, Mrs. Jerome Allen, 372 Stuyvesant Avenue, Brooklyn, N. Y. Number of patients treated during the past year, 9,148. Number of operations the past year, 1,315. Number of prescriptions given the past year, 7,701. Number of outside visits made the past year, 916. "The cutting down of appropriations for dispensaries seems to be an addition to the discomfort of the poor, who are unable to provide themselves with necessary medicine and relief. In this dispensary those who are able to pay ten cents for their prescription, gladly do so, and feel more of an independence in doing it. Those who are not able to pay are soon known and ministered to as freely as though they were. This region is an excellent one for a dispensary, because here one is greatly needed, and the amount, though small, appropriated to it by the city is welcomed and used judiciously."

Gates Avenue Homœopathic Dispensary, 13 Gates Avenue, Brooklyn, N. Y. Incorporated 1867. Opened for patients 1867. Executive Officer, D. R. Aldridge, 32 Burling Slip, New York, N. Y. Number of patients treated the past year, 1,675. Number of prescriptions given the past year, 5,477. Number of outside visits made the past year, 159. Number of surgical operations the past year, 350. Cost of conducting the dispensary the past year, $799.48.

Memorial Dispensary, 811 Bedford Avenue, Brooklyn, N. Y. Incorporated 1894. Opened for patients 1883. Executive Officer, Mabel C. Sisson, M.D., 360 Greene Avenue, Brooklyn, N. Y. Number of patients treated the past year, 3,857. Number of prescriptions given the past year, 5,879. Number of outside visits made the past year, 811. Cost of conducting the dispensary the past year, $1,171.56. "This dispensary is holding its own in a neighborhood recently invaded by a large number of young physicians."

Twenty-sixth Ward Homœopathic Dispensary, Brooklyn, N. Y. Incorporated 1894. Opened for patients 1894. Executive Officer, George J. Jardin, 2730 Atlantic Avenue, Brooklyn, N. Y. Number of patients treated the past year, 1,252. Number of patients treated the past year, 1,156. Number of prescriptions given pensary the past year, $288.22. Delegate, H. O. Rockefeller, M.D., 152 Juburn Street, Brooklyn, N. Y.

Hahnemann Hospital, Out Door Department, New York, N. Y. Incorporated 1875. Opened for patients 1891. We have been unable to obtain a report from this dispensary this year.

New York Homœopathic Medical College and Hospital, Out Door Department, New York, N. Y. Incorporated 1860. Opened for patients 1890. Executive Officer, Charles H. Hornby, M.D., Superintendent, 429 East Sixty-third Street, New York City. Number of patients treated last year, 3,566. Number of prescriptions given the past year, 7,571. Number of outside visits made the past year, 6,158. Cost of conducting the dispensary the past year, $1,615.20.

Dispensary of New York Medical College and Hospital for Women, 19 West One Hundred and First Street, New York City. Incorporated 1863. Opened for patients 1863. Executive Officer, Mrs. H. LeBender, 11 West Ninety-eighth Street, New York City. Number of patients treated the past year, 278. Number of prescriptions given the past year, 940. Delegate, Cordelia Williams, M.D.

New York Ophthalmic Hospital, Out of Door Department, New York, N. Y. Incorporated 1852. Opened for patients 1852. Executive Officer, James Worrall Arthur, 111 Liberty Street, New York City. Number of patients treated the past year, 14,635. Number of prescriptions given the past year, 53,129. Delegate, Frank H. Boynton, M.D.

Homœopathic Free Dispensary, Rochester, N. Y. Incorporated 1887. Opened for patients 1889. Executive Officer, Granger A. Hollister, Rochester, N. Y. Number of patients treated the year, 1,156. Number of prescriptions given the the past year, 3,511. Delegate, Edwin H. Wolcott, M.D.

OHIO

Free Dispensary of the Ohio Hospital for Women and Children, Cincinnati, Ohio. Incorporated 1881. Opened for patients 1881. Executive Officer, Ella E. Huntington, M.D., 630 West Eighth Street, Cincinnati, Ohio. Number of patients treated the past year, 390. Number of prescriptions given the past year, 1,285. Cost of conducting the dispensary the past year, $111.60, exclusive of rent and care of rooms, light and fuel, which are furnished by the Ohio hospital for Women and Children, of which the dispensary is a part. Delegate, Ida E. McCormick, M.D.

Homœopathic Eye and Ear Dispensary, Cincinnati, Ohio. Incorporated 1871. Opened for patients 1871. Executive Officer, Thomas M. Stewart, M.D., 704 Elm Street, Cincinnati, Ohio. Number of patients treated the past year, 520. Number of prescriptions given the past year, 1,517. Number of outside visits made the past year, 40. Delegate, Thomas M. Stewart, M.D.

Homœopathic Free Dispensary, Cincinnati, Ohio. Incorporated 1867. Opened for patients 1867. Executive Officer, Charles E. Walton, M.D., Eighth and John Streets, Cincinnati, Ohio. Number of patients treated the past year, 3,036. Number of prescriptions given the past year, 9,079. Number of outside visits made the past year, 138. Delegate, Charles E. Walton, M.D.

Free Medical and Surgical Dispensary for Women and Children, Cleveland, Ohio. Incorporated 1895. Opened for patients 1878. Executive Officer, Martha M. Stone, M.D., 914 Prospect Street, Cleveland, Ohio. We have been unable to obtain any report from this dispensary this year.

Good Samaritan Dispensary, Cleveland, Ohio. Incorporated 1849. Opened for patients 1849. Executive Officer, J. Richey Horner, M.D., 275 Prospect Street, Cleveland, Ohio. Number of patients treated the past year, 10,708. Number of prescriptions given the past year, 19,609. Number of outside visits made during the past year, 308. Delegate, J. Richey Horner, M.D.

OREGON

Dispensary of the Presbyterian Chinese Mission, Portland, Oregon. Not incorporated. Opened for patients 1894. Executive Officer, Mrs. W. S. Holt, 350 Fourteenth Street, Portland, Oregon. We have been unable to obtain any report from this dispensary this year.

PENNSYLVANIA

Children's Homœopathic Hospital of Philadelphia, Franklin and Thompson Streets, Philadelphia, Pa. Incorporated 1877. Opened for patients 1877. Executive Officer, Walter Strong, M.D., 2105 North Thirteenth Street, Philadelphia, Pa. Number of patients treated the past year, 12,343. Number of prescriptions given the past year, 27,669. Number of outside visits made the past year, 1,149. Delegate, Augustus Korndoerfer, M.D.

Hahnemann Medical College Dispensary, Philadelphia, Pa. Incorporated 1848. Opened for patients 1848. Executive Officer, Charles Mohr, M.D., Oak Lane, Philadelphia, Pa. Number of patients treated the past year, 23,552. Number of prescriptions given the past year, 41,724. Delegate, Charles Mohr, M.D.

St. Luke's Homœopathic Hospital Dispensary, Philadelphia, Pa. Incorporated 1896. Opened for patients 1896. Executive Officer, Miss Mary E. Lewars, 84 Fisher's Lane, Germantown, Philadelphia, Pa. Number of patients treated the past year, 3,305. Number of prescriptions given the past year, 18,046. Delegate, Thomas H. Carmichael, M.D.

Dispensary of the Women's Homœopathic Association of Pennsylvania Medical, Surgical and Maternity Hospital, Philadelphia, Pa. Incorporated 1882. Opened for patients 1884. Executive Officer, Mrs. F. B. Skinner, Provident Building, Philadelphia, Pa. Number of patients treated the past year, 4,317. Number of prescriptions given the past year, 10,214. Number of outside visits made the past year, 3,194.

Women's Southern Homœopathic Dispensary, Philadelphia, Pa. Incorporated 1896. Opened for patients 1896. Executive Officer, Miss Annie M. Miller, 1911 Mount Vernon Street, Philadelphia, Pa. Number of patients treated the past year, 452. Number of prescriptions given the past year, 1,460. Number of outside visits made the past year, 917.

Hahnemann Medical College of the Pacific, San Francisco, Cal. Incorporated 1866. Opened for patients 1866. Executive Officer, G. T. Stewart, Pittsburg, Pa. We have been unable to obtain any report from this dispensary this year.

Reading Homœopathic Dispensary, Reading, Pa. Incorporated 1890. Opened for patients 1888. Executive Officer, Henry F. Schantz, M.D., 402 North Fifth Street, Reading, Pa. Number of patients treated the past year, 1,763. Number of prescriptions given the past year, 5,835. Delegate, Margaret Hassler Schantz, M.D.

RHODE ISLAND

Providence Free Homœopathic Dispensary, Providence, R. I. Incorporated 1883. Opened for patients 1874. Executive Officer, Charles W. Bowen, M.D., 194 Broadway, Providence, R. I. "This dispensary is temporarily 'out of commission.' We hope to reorganize soon and start again in a permanent home of our own."

HOMOEOPATHIC COLLEGES

Hohnemann Medical College of the Pacific, San Francisco, Cal. Incorporated 1883. Opened for students 1884. Dean, James W. Ward, M.D., 606 Sutter Street, San Francisco, Cal. Length of each yearly course, eight and a half months, commencing in March of each year. Number of courses requisite for graduation, 4. Number of students in attendance the past year, 44. Number of graduates in last Commencement, 12. Number of Alumni belonging to the school, 154 Number of Faculty, 31. Number of Professors, 18. Number of Lecturers, 13. Value of college buildings and land, $30,000. No debt. Amount of endowment, $1,250. Amount of annual income, $3,000. Delegate, James W. Ward, M.D. "Have received $50,000 in gifts for the Hahnemann Hospital, which is the clinical arm of the college."

Denver Homœopathic College and Hospital, Denver, Col. Incorporated 1894. Opened for students 1894. Dean, James Polk Willard, M.D., Masonic Temple, Denver, Col. Length of each yearly course, seven months, commencing in September of each year. Number of courses requisite for graduation, 4. Number of students in attendance the past year, 30. Number of graduates at last commencement, 6. Number of Alumni belonging to the school, 63. Number of Faculty, 29. Number of Professors, 22. Number of Lecturers, 7. Value of college buildings and land, $35,000. Amount of debt, $14,000. Delegate, David A. Strickler, M.D.

Hahnemann Medical College and Hospital of Chicago. Incorporated 1855. Opened for students 1860. Dean, E. Stillman Bailey, M.D., 3034 Michigan Avenue, Chicago, Ill. Length of each yearly course, one year, commencing in May of each year. Number of courses requisite for graduation, 4. Number of students in attendance the past year, 195. Number of graduates at last Commencement, 70. Number of Alumni belonging to this school, 2,337. Number in Faculty,

61. Number of Professors, 40. Number of Lecturers, 21. Value of college buildings and land, $140,000. Delegates, Charles J. Swan, M.D., George F. Shears, M.D.

Chicago Homœopathic Medical College, Chicago, Ill. Incorporated 1876. Opened for students 1876. Dean, William M. Stearns, M.D., 31 Washington Street, Chicago, Ill. Length of each yearly course, seven and a half months, commencing in September of each year. Number of courses required for graduation, 4. Number of students in attendance the past year, 166. Number of graduates at last commencement, 37. Number of Alumni belonging to the school, 1,179. Number of Faculty, 68. Number of Professors, 41. Number of Lecturers, 27. Value of college buildings and land, $125,000. Amount of debt, $25,000. Amount of annual income, $16,000. Delegate, Allen C. Cowperthwaite, M.D.

Hering Medical College, Chicago, Ill. Incorporated 1892. Opened for students 1893. Dean, James Tyler Kent, M.D., 92 State Street, Chicago, Ill. Length of each yearly course, seven months, commencing in September of each year. Number of courses requisite for graduation, 4. Number of students in attendance the past year, 90. Number of graduates at last Commencement, 23. Number of Alumni belonging to the school, about 223. Number in Faculty, 45. Number of Professors, 35. Number of Lecturers, 10. Value of college buildings and land, $50,000. Amount of annual income, $10,000. Delegate, Henry C. Allen, M.D.

College of Homœopathic Medicine of the State University of Iowa, Iowa City, Iowa. Not incorporated. Opened for students 1877. Dean, George Royal, M.D., 308, 505 Wanut Street, Des Moines, Iowa. Length of each yearly course, nine months, commencing in September of each year. Number of courses requisite for graduation, 4. Number of students in attendance last year, 35. Number of graduates at last Commencement, 11. Number of Alumni belonging to the school, 255. Number in Faculty, 15. Number of Professors, 5. Number of Lecturers, 10. College buildings and land belong to the State. Delegates, George Royal, M.D., R. B. Johnston, M.D.

Southern Homœopathic Medical College, Louisville, Ky. Incorporated 1892. Opened for students 1893. Dean, A. Leight Monroe, M.D., Louisville, Ky. Length of each yearly course, seven months, commencing in October of each year. Number of courses requisite for graduation, 4. Number of students in attendance the last year, 24. Number of graduates at last Commencement, 5. Number of Alumni belonging to the school, 63. Number in Faculty, 29. Number of Professors, 17. Number of Lecturers, 12. Value of college buildings and land, $10,000. Amount of debt, $5,000. Amount of annual income, $2,000. Delegate, George S. Coon, M.D.

Southern Homœopathic Medical College and Hospital, Baltimore, Md. Incorporated 1890. Opened for students 1891. Dean, George T. Shower, M.D., 421 Roland Avenue, Baltimore, Md. Length of each yearly course, seven months, commencing in October of each year. Number of courses requisite for graduation, 4. Number of students in attendance last year, 26. Number of graduates at last Commencement, 3. Number of Alumni belonging to the school, 90. Number in Faculty, 30. Number of Professors, 12. Number of Lecturers, 18. Value of college buildings and land, $30,000. Amount of annual income, $2,400. Delegates, George T. Shower, M.D., Charles L. Rumsey, M.D. "Twenty-five thousand dollars appropriated by the State annually for two years, commencing October, 1902."

Boston University School of Medicine, Boston, Mass. Opened to students 1873. Dean, John P. Sutherland, M.D., 295 Commonwealth Avenue, Boston, Mass. Length of each yearly course, eight months, commencing in October of each year. Number of courses requisite for graduation, 4. Number of students in attendance last year, 124. Number of graduates at last Commencement, 36. Number of Alumni belonging to the school, 935. Number in Faculty, 58. Number of Professors, 22. Number of Lecturers, 36. Value of college buildings and grounds, $200,000. Amount of debt, $42,000. Amount of endowment, $51,000. Delegates, John P. Sutherland, M.D., Frank C. Richardson, M.D.

Homœopathic Medical College of the University of Michigan, Ann Arbor, Mich. Dean, Wilbert B. Hinsdale, M.D., Ann Arbor, Mich. Length of each yearly course, thirty-eight weeks, commencing in September of each year. Number of

courses requisite for graduation, 4. Number of students in attendance the past year, 75. Number of graduates at last Commencement, 15. Number of Alumni belonging to the school, 500. Number in Faculty, 28. Number of Professors, 20. Number of Lecturers, 8. Value of college buildings and land, $500,000. Amount of annual income, $20,000. Delegate, Wilbert B. Hinsdale, M.D.

Detroit Homœopathic Medical College, Detroit, Mich. Incorporated 1872. Opened for students 1872. Dean, Daniel A. MacLachlan, M.D., Majestic Building, Detroit, Mich. Length of each yearly course thirty weeks, commencing in September of each year. Number of courses requisite for graduation, 4. Number of students in attendance the past year, 52. Number of graduates at last Commencement, 14. Number of Alumni belonging to the school, 30. Number in Faculty, 28. Number of Professors, 18. Number of Lecturers, 10. Value of college buildings and land, $50,000. Amount of debt, $14,000. Amount of annual income, $3,500. Delegate, Alfred Graham, M.D. "The number of Alumni as given above includes the number since re-organization only."

College of Homœopathic Medicine and Surgery, of the University of Minnesota, Minneapolis, Minn. Incorporated 1888. Opened for students 1888. Dean, Alonzo P. Williamson, M.D., 602 Nicollet Avenue, Minneapolis, Minn. Length of each yearly course eight and a half months, commencing in September of each year. Number of courses requisite for graduation, 4. Number of students in attendance the past year, 18. Number of graduates at last Commencement, 6. Number of Alumni belonging to the school, 73. Number in Faculty, 14. Number of Professors, 14. Number of Lecturers, 8. The college property belongs to the State. Delegates, Alonzo P. Williamson, M.D., Warren S. Briggs, M.D.

Kansas City Hahnemann Medical College of the Kansas City University, Kansas City, Mo. Dean, Samuel H. Anderson, M.D., 1214 Main Street, Kansas City, Mo. Length of each yearly course seven months, commencing in September of each year. Number of courses requisite for graduation, 4. Number of students in attendance the past year, 72. Number of graduates at the last Commencement, 17. Number of Alumni belonging to the school, 184. Number of Faculty, 31. Number of Professors, 10. Number of Lecturers, 21. Amount of endowment, $5,000. Amount of annual income, $3,300. Delegates, Samuel H. Anderson, M.D., Moses T. Runnels, M.D.

Homœopathic Medical College of Missouri, St. Louis, Mo. Incorporated 1857. Opened to students 1860. We have been unable to obtain any report from this college this year.

New York Homœopathic Medical College and Hospital, New York, N. Y. Incorporated 1860. Opened to students 1860. Dean, William H. King, M.D., 64 West Fifty-first Street, New York City. Length of each yearly course seven months, commencing in October of each year. Number of courses requisite for graduation, 4. Number of students in attendance the past year, 111. Number of graduates at last Commencement, 29. Number of Alumni belonging to the school, 1,450. Number in Faculty, 51. Number of Professors, 29. Number of Lecturers, 32. Value of college building and land, $825,000. Amount of debt, $100,000. Amount of Endowment, $395,000. Amount of Annual Income, $87,000. Delegates, William H. King, M.D., Henry M. Dearborn, M.D.

New York Medical College and Hospital for Women, New York, N. Y. Incorporated 1863. Opened to students 1863. Dean, M. Belle Brown, M.D., 30 West Fifty-first Street, New York City. Length of each yearly course twenty-six weeks, commencing in October of each year. Number of courses requisite for graduation, 4. Number of students in attendance the past year, 34. Number of graduates at the last Commencement, 8. Number of Alumni belonging to the school, 348. Number in Faculty, 43. Number of Professors, 23. Number of Lecturers, 20. Delegates, M. Belle Brown, M.D., George W. Roberts, M.D.

Cleveland Homœopathic Medical College, Cleveland, Ohio. Incorporated 1850. Opened to students 1850. Dean, Gaius J. Jones, M.D., Caxton Building, Cleveland, Ohio. Length of each yearly course, thirty weeks, commencing in September of each year. Number of courses requisite for graduation, 4. Number of students in attendance the past year, 115. Number of graduates at last Commencement, 40. Number of Alumni belonging to the school, 2,340. Number in Faculty, 56. Number of Professors, 26. Number of Lecturers, 30. Value of

college buildings and land, $150,000. Amount of debt, $45,000. Delegates, Gaius Jones, M.D., J. Richey Horner, M.D.

Pulte Medical College, Cincinnati, Ohio. Incorporated 1872. Opened to students 1872. Dean, Jirah D. Buck, M.D., 116 North Seventh Street, Cincinnati, Ohio. Length of each yearly course, twenty-eight weeks, commencing first Wednesday in October of each year. Number of courses requisite for graduation, 4. Number of students in attendance the past year, 32. Number of graduates at last Commencement, 10. Number of Alumni belonging to school, 597. Number in Faculty, 35. Number of Professors, 18. Number of Lecturers, 17. Value of college building and land, $20,000. No endowment. Delegate, Charles E. Walton, M.D.

Hahnemann Medical College of Philadelphia. Incorporated 1848. Opened to students 1848. DeVan, Charles M. Thomas, M.D., 1623 Arch Street, Philadelphia, Pa. Length of each yearly course, seven and a half months, commencing in October of each year. Number of courses requisite for graduation, 4. Number of students in attendance the past year, 233. Number of graduates at last Commencement, 69. Number of Alumni belonging to school, 2,689. Number in Faculty, 56. Number of Professors, 16. Number of lecturers, 40. Value of college building and land, $1,063,320. Amount of debt, $169,000. Amount of endowment, $259,674. Delegate, Charles Mohr.

HOMOEOPATHIC JOURNALS

The American Physician. Established 1876. Published monthly, octavo form, by A. L. Chatterton & Co., 97-99 Reade Street, New York City. Edited by Frank Kraft, M.D., 57 Bell Avenue, Cleveland, Ohio. Subscription price, $2.00. Sixty pages in each number.

The American Medical Monthly. Established 1883. Published monthly, octavo form, by Fosnot, Williams & Co., 229 North Howard Street, Baltimore, Md. Edited by Henry Chandlee, M.D., 704 West North Avenue, Baltimore, Md. Subscription price, $1.00. Seventy-two pages in each number.

The Chironian. Established 1884. Published monthly, from October to May of each year, by the students of the New York Homœopathic College and Hospital, Avenue A and Sixty-third Street, New York City. Edited by one of the members of the senior class of each year. Subscription price, $1.00. Twenty-six pages in each number.

The Cleveland Medical and Surgical Reporter. Established 1900. Published monthly, octavo form, by Cleveland Homœopathic Medical College, Cleveland, Ohio, Edited by J. Richey Horner, M.D., 275 Prospect Street, Cleveland, Ohio. Subscription price, $1.00. Eighty pages in each number.

The Clinic of Syracuse. Established 1898. Published monthly, quarto form, by E. Elmer Keeler, M.D., 452 South Salina Street, Syracuse, N. Y. Edited by E. Elmer Keeler, M.D., 452 South Salina Street, Syracuse, N. Y. Subscription price, fifty cents. Thirty-six pages in each number.

The Clinical Reporter. Established 1887. Published monthly, quarto form, by W. W. Gilbert, M.D., 314 South Jefferson Avenue, St. Louis, Mo. Edited by D. M. Gibson, M.D., 241 South Jefferson Avenue, St. Louis, Mo. Subscription price, $1.00. Forty-eight pages in each number.

The Clinique. Established 1880. Published monthly, octavo form, by W. Henry Wilson, M.D., 2813 Cottage Grove Avenue, Chicago, Ill. Edited by Homer V. Halbert, M.D., 70 State Street, Chicago, Ill. Subscription price, $2.00. Fifty-six to sixty-four pages in each number.

The Critique. Established 1894. Published monthly, octavo form, by the Denver Journal Publishing Co., Denver, Col. Edited by James W. Mastin, M.D., 25 Eighteenth Avenue, Denver, Col., and J. Wylie Anderson, M.D., Steele Block, Denver, Col. Subscription price, $1.00. Sixty pages in each number.

The Hahnemann Institute. We have been unable to obtain any report of this journal this year.

The Hahnemannian Monthly. Established 1865. Published monthly, octavo form, by The Hahnemannian Monthly (Inc.), 1506 Arch Street, Philadelphia, Pa. Edited by Clarence Bartlett, M.D., 1506 Arch Street, Philadelphia, Pa. Subscription price, $3,00. Ninety-six to one hundred pages, exclusive of advertisements, in each number.

The Homœopathic Envoy. Established 1891. Published monthly, quarto form, by E. P. Anschutz, P. O. Box 921, Philadelphia, Pa. Edited by E. P. Anschutz, P. O. Box 921, Philadelphia, Pa. Subscription price, twenty-five cents. Eight pages in each number.

The Homœopathic Journal of Obstetrics, Gynæcology and Pædology. Established 1879. Published bi-monthly, octavo form, by A. L. Chatterton & Co., 97-99 Reade Street, New York City. Edited by William Francis Honan, M.D., Sherman Square Hotel, New York City. Subscription price, $4.00. One hundred and sixteen pages in each number.

The Homœopathic Journal of Pædiatrics. Established 1902. Published monthly, octavo form, by John O. Chadwick, M.D., 382 Franklin Street, Buffalo, N. Y. Edited by John C. Chadwick, M.D., 382 Franklin Street, Buffalo, N. Y. Subscription price, $1.00. Fifty-two pages in each number.

The Homœopathic News. Established 1871. Published monthly, octavo form, by F. August Luyties, 619 Locust Street, St. Louis, Mo. Edited by Charles R. Vogel, M.D., 84 Wabash Avenue, Chicago, Ill. Subscription price, $1.00. Sixty-four pages in each number.

The Homœopathic Recorder. Established 1886. Published monthly, octavo form, by Boericke & Tafel, 1911 Arch Street, Philadelphia, Pa. Edited by E. P. Anschutz, P. O. Box 921, Philadelphia, Pa. Subscription price, $1.00. Forty-eight pages in each number.

The Journal of Homœopathics. Established 1897. Published monthly, octavo form, by Harvey Farrington, M.D., 815 Marshall Field Building, Chicago, Ill. Edited by Harvey Farrington, M.D., 815 Marshall Field Building, Chicago, Ill. Subscription price, $2.00. Forty pages in each number.

The Homœopathic Eye, Ear and Throat Journal. Established 1895. Published monthly, octavo form, by the editors, 111 East Seventieth Street, New York City. Edited by Arthur B. Norton, M.D., 16 West Forty-fifth Street, New York City; John B. Garrison, M.D., 111 East Seventieth Street, New York City, and Charles H. Helfrich, M.D., 542 Fifth Avenue, New York City. Subscription price, $2.00. Seventy to eighty pages in each number.

The Journal of Ophthalmology, Otology and Laryngology. Established 1889. Published bi-monthly, octavo form, by A. L. Chatterton & Co., 97-99 Reade Street, New York City. Edited by John L. Moffat, M.D., 1136 Dean Street, Brooklyn, N. Y. Subscription price, $4. One hundred pages in each number.

The Medical Advance. Established 1873. Published monthly, octavo form, by Henry C. Allen, M.D., 5142 Washington Avenue, Chicago, Ill. Edited by Henry C. Allen, M.D., 5142 Washington Avenue, Chicago, Ill. Subscription price, $2.00. Seventy-five pages in each number.

The Medical Century. Established 1893. Published monthly, quarto form, by Medical Century Co., 9 East Forty-second Street, New York City. Edited by Willis A. Dewey, M.D., Ann Arbor, Mich. Subscription price, $2.00. Thirty-two pages in each number.

The Medical Counselor. Established 1881. Published monthly, octavo form, by Medical Counselor Publishing Club, 32 Adams Avenue, West, Detroit, Mich. Edited by Stephen H. Knight, M.D., 18 West Willis Avenue, Detroit, Mich. Subscription price, $1.00. Forty pages in each number.

The Medical Era. Established 1883. Published monthly, quarto form, by Era Publishing Co., Chicago, Ill. Edited by Charles Catchell, M.D., 100 State Street, Chicago, Ill. Subscription price, $1.00. Forty-eight pages in each number.

The Medical Student. Established 1886. Published monthly, from October to June, inclusive, octavo form, by Boston University School of Medicine (Students), Boston, Mass. Edited by Ray S. Davies, M.D., Cullis' Home, Dorchester, Mass. Subscription price, $1.00. Forty-four pages in each number.

The Medical Visitor. Established 1884. Published monthly, quarto form, by Halsey Bros. Co., 95 Wabash Avenue, Chicago, Ill. Edited by Wilson A. Smith, M.D., 11,109 Fairfield Avenue, Morgan Park, Ill. Subscription price, $1.00. Forty-eight pages in each number.

The Minneapolis Homœopathic Magazine. We have been unable to obtain any report from this journal this year.

The New England Medical Gazette. Established 1865. Published monthly, octavo form, by Otis Clapp & Son, 10 Park Square, Boston, Mass. Edited by A.

T. Faering, M.D., 10 Park Square, Boston, Mass. Subscription price, $2.00. Twenty-eight pages in each number.

The North American Journal of Homœopathy. Established 1852. Published monthly, octavo form, by Journal Publishing Club (Lim.), 181 West Seventy-third Street, New York City. Edited by Eugene E. Porter, M.D., 181 West Seventy-third Street, New York City. Subscription price, $3.00. Seventy-two pages in each number.

The Pacific Coast Homœopathic Journal. Established 1882. Published monthly, royal octavo form, by Journal Publishing Co., San Francisco, Cal. Edited by Hugo R. Arndt, M.D., 330 Sutter Street, San Francisco, Cal.; Guy E. Manning, M.D., 135 Geary Street, San Francisco, Cal.; F. B. Kellogg, M.D., Douglass Building, San Francisco, Cal. Subscription price, $2.00. Thirty-six pages in each number.

The Progress. Established 1903. Published monthly, octavo form, by Western Newspaper Union, Eighteenth and Curtis Streets, Denver, Col. Edited by David A. Strickler, M.D., 705 Fourteenth Street, Denver, Col. Subscription price, $2.00. Fifty pages in each number.

RECAPITULATION

Number of National Societies	9
Number of Sectional or Interstate Societies	8
Number of State Societies	34
Number of local societies	97
Number of Medical Clubs	49
Number of Alumni Associations	10
Number of Miscellaneous Homœopathic Associations	3
Number of General Hospitals	80
Number of Private and Special Hospitals	61
Number of Sanitariums	58
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APPENDIX

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Constitution and By-Laws
Standing Resolutions
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HISTORICAL NOTE

In July, 1843, the *New York Homœopathic Physicians' Society* issued invitations to the homœopathic physicians of the United States to meet in general convention in the city of New York for the purpose of forming a National Homœopathic Medical Society. The invitation was responded to by a considerable number of the leading homœopathic practitioners of the country, who, according to previous arrangement, convened in the Lyceum of Natural History in New York City, on the 10th day of April, 1844, the eighty-ninth anniversary of the birth of the illustrious Hahnemann.

The convention was organized by electing Constantine Hering, M. D., of Philadelphia, Pa., President; Josiah F. Flagg, M. D., of Boston, Mass., and William Channing, M. D., of New York City, N. Y., Vice-Presidents; and Henry Dunnell, M. D., Secretary.

The following resolution was unanimously adopted:

Resolved, That it is deemed expedient to establish a society entitled *"The American Institute of Homœopathy."*

John F. Gray, M. D., was elected General Secretary of the Institute, and S. R. Kirby, M. D., Treasurer.

The Convention having accomplished the object for which it had assembled, on motion, adjourned, *sine die.*

Immediately after the adjournment of the Convention, on the evening of the 10th day of April, 1844, at the call of John F. Gray, M. D., General Secretary-elect, the First Session of the *American Institute of Homœopathy was held.* Josiah F. Flagg, M. D., Boston, Mass., was elected Chairman, and A. Gerald Hull, M. D., New York City, N. Y., Provisional Secretary.

CHRONOLOGICAL LIST OF OFFICERS

FIRST SESSION

HELD AT NEW YORK CITY, N. Y., APRIL 10, 1844

JOSIAH F. FLAGG, M. D., Boston, Mass., *Chairman.*
JOHN F. GRAY, M. D., New York, N. Y., *General Secretary.*
A. GERALD HULL, M. D., New York, N. Y., *Provisional Secretary.*
S. R. KIRBY, M. D., New York, N. Y., *Treasurer.*

SECOND SESSION

HELD AT NEW YORK CITY, N. Y., MAY 14, 1845

JACOB JEANES, M. D., Philadelphia, Pa., *Chairman.*
EDWARD BAYARD, M. D., New York, N. Y., *General Secretary.*
R. A. SNOW, M. D., New York, N. Y., *Provisional Secretary.*
S. R. KIRBY, M. D., New York, N. Y., *Treasurer.*

THIRD SESSION

HELD AT PHILADELPHIA, PA., MAY 13, 1846

S. R. KIRBY, M. D., New York, N. Y., *Chairman.*
EDWARD BAYARD, M. D., New York, N. Y., *General Secretary.*
R. A. SNOW, M. D., New York, N. Y., *Provisional Secretary.*
S. R. KIRBY, M. D., New York, N. Y., *Treasurer.*

FOURTH SESSION

HELD AT BOSTON, MASS., JUNE 9, 1847

F. R. McMANUS, M. D., Baltimore, Md., *Chairman.*
EDWARD BAYARD, M. D., New York, N. Y., *General Secretary.*
R. A. SNOW, M. D., New York, N. Y., *Provisional Secretary.*
S. R. KIRBY, M. D., New York, N. Y., *Treasurer.*

FIFTH SESSION

HELD AT NEW YORK CITY, N. Y., JUNE 14, 1848

WALTER WILLIAMSON, M. D., Philadelphia, Pa., *Chairman.*
EDWARD BAYARD, M. D., New York, N. Y., *General Secretary.*
R. A. SNOW, M. D., New York, N. Y., *Provisional Secretary.*
S. R. KIRBY, M. D., New York, N. Y., *Treasurer.*

SIXTH SESSION

HELD AT PHILADELPHIA, PA., JUNE 13, 1849

WALTER WILLIAMSON, M. D., Philadelphia, Pa., *Chairman.*
ALVIN E. SMALL, M. D., New York, N. Y., *General Secretary.*
WILLIAM P. ESREY, M. D., Springfield, Mass., *Provisional Secretary.*
S. R. KIRBY, M. D., New York, N. Y., *Treasurer.*

SEVENTH SESSION

HELD AT ALBANY, N. Y., JUNE 12, 1850

EDWARD BAYARD, M. D., New York, N. Y., *Chairman.*
ALVIN E. SMALL, M. D., Philadelphia, Pa., *General Secretary.*
G. W. SWAZEY, M. D., Springfield, Mass., *Provisional Secretary.*
S. R. KIRBY, M. D., New York, N. Y., *Treasurer.*

EIGHTH SESSION

HELD AT NEW HAVEN, CONN., JUNE 11, 1851

WILLIAM E. PAYNE, M. D., Bath, Me., *Chairman.*
G. W. SWAZEY, M. D., Springfield, Mass., *General Secretary.*
CHARLES G. FOOTE, M. D., New Haven, Conn., *Provisional Secretary.*
S. R. KIRBY, M. D., New York, N. Y., *Treasurer.*

NINTH SESSION

HELD AT BALTIMORE, MD., MAY 19, 1852

ELIAL T. FOOTE, M. D., New Haven, Conn., *Chairman.*
WILLIAM A. GARDINER, M. D., Philadelphia, Pa., *General Secretary.*
S. S. GUY, M. D., Brooklyn, N. Y., *Provisional Secretary.*
S. R. KIRBY, M. D., New York, N. Y., *Treasurer.*

TENTH SESSION

HELD AT CLEVELAND, O., JUNE 8, 1853

RICHARD GARDINER, M. D., Philadelphia, Pa., *Chairman.*
WILLIAM A. GARDINER, M. D., Philadelphia, Pa., *General Secretary.*
S. S. GUY, M. D., Brooklyn, N. Y., *Provisional Secretary.*
S. R. KIRBY, M. D., New York, N. Y., *Treasurer.*

ELEVENTH SESSION

HELD AT ALBANY, N. Y., JUNE 7, 1854

LYMAN CLARY, M. D., Syracuse, N. Y., *Chairman.*
S. S. GUY, M. D., Brooklyn, N. Y., *General Secretary.*
J. REDMAN COE, JR., M. D., Philadelphia, Pa., *Provisional Secretary.*
A. S. BALL, M. D., New York, N. Y., *Treasurer.*

TWELFTH SESSION

HELD AT BUFFALO, N. Y., JUNE 6, 1855

C. H. SKIFF, M. D., New Haven, Conn., *Chairman.*
J. P. DRAKE, M. D., Pittsburg, Pa., *General Secretary.*
A. H. BEERS, M. D., Buffalo, N. Y., *Provisional Secretary.*
S. S. GUY, M. D., Brooklyn, N. Y., *Treasurer.*

THIRTEENTH SESSION

HELD AT WASHINGTON, D. C., JUNE 4, 1856

G. W. SWAZEY, M. D., Springfield, Mass., *Chairman.*
F. R. McMANUS, M. D., Baltimore, Md., *General Secretary.*
J. MIDDLETON, M. D., Baltimore, Md., *Provisional Secretary.*
S. S. GUY, M. D., Brooklyn, N. Y., *Treasurer.*

FOURTEENTH SESSION

HELD AT CHICAGO, ILL., JUNE 3, 1857

J. P. DAKE, M. D., Pittsburg, Pa., *Chairman.*
D. S. SMITH, M. D., Chicago, Ill., *General Secretary.*
G. E. SHIPMAN, M. D., Chicago, Ill., *Provisional Secretary.*
S. S. GUY, M. D., Brooklyn, N. Y., *Treasurer.*

FIFTEENTH SESSION

HELD AT BROOKLYN, N. Y., JUNE 2, 1858

D. S. SMITH, M. D., Chicago, Ill., *Chairman.*
WILLIAM E. PAYNE, M. D., Bath, Me., *General Secretary.*
E. T. RICHARDSON, M. D., Brooklyn, N. Y., *Provisional Secretary.*
S. S. GUY, M. D., Brooklyn, N. Y., *Treasurer.*

SIXTEENTH SESSION

HELD AT BOSTON, MASS., JUNE 1, 1859

P. P. WELLS, M. D., Brooklyn, N. Y., *Chairman.*
HENRY D. PAYNE, M. D., Albany, N. Y., *General Secretary.*
I. T. TALBOT, M. D., Boston, Mass., *Provisional Secretary.*
C. H. SKIFF, M. D., New Haven, Conn., *Treasurer.*

SEVENTEENTH SESSION

HELD AT PHILADELPHIA, PA., JUNE 2, 1860

E. C. WITHERELL, M. D., Cincinnati, O., *Chairman.*
JACOB BEAKLEY, M. D., New York, N. Y., *General Secretary.*
HENRY M. SMITH, M. D., New York, N. Y., *Provisional Secretary.*
C. D. SKIFF, M. D., Brooklyn, N. Y., *Treasurer.*

(No sessions were held during the Civil War.)

EIGHTEENTH SESSION

HELD AT CINCINNATI, OHIO, JUNE 7, 1865

S. S. GUY, M. D., Brooklyn, N. Y., *President.*
I. T. TALBOT, M. D., Boston, Mass., *Vice-President.*
G. D. BEEBE, M. D., Chicago, Ill., *General Secretary.*
WILLIAM TOD HELMUTH, M. D., St. Louis, Mo., *Provisional Secretary.*
D. S. SMITH, M. D., Chicago, Ill., *Treasurer.*

(By a change of the by-laws the Chairman became President, and the office of Vice-President was instituted at this Session.)

NINETEENTH SESSION

HELD AT PITTSBURG, PA., JUNE 6, 1866

J. S. DOUGLAS, M. D., Milwaukee, Wis., *President.*
S. R. BECKWITH, M. D., Cleveland, O., *Vice-President.*
I. T. TALBOT, M. D., Boston, Mass., *General Secretary.*
HENRY B. CLARKE, M. D., New Bedford, Mass., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

TWENTIETH SESSION

HELD AT NEW YORK CITY, N. Y., JUNE 4, 1867

WILLIAM TOD HELMUTH, M. D., St. Louis, Mo., *President.*
P. P. WELLS, M. D., Brooklyn, N. Y., *Vice-President.*
I. T. TALBOT, M. D., Boston, Mass., *General Secretary.*
HORACE M. PAINE, M. D., Albany, N. Y., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

TWENTY-FIRST SESSION

HELD AT ST. LOUIS, MO., JUNE 2, 1868

HENRY D. PAINE, M. D., New York, N. Y., *President.*
T. G. COMSTOCK, M. D., St. Louis, Mo., *Vice-President.*
I. T. TALBOT, M. D., Boston, Mass., *General Secretary.*
H. L. CHASE, M. D., Cambridge, Mass., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

TWENTY-SECOND SESSION

HELD AT BOSTON, MASS., JUNE 8, 1869

REUBEN LUDLAM, W. D., Chicago, Ill., *President.*
D. H. BECKWITH, M. D., Cleveland, O., *Vice-President.*
I. T. TALBOT, M. D., Boston, Mass., *General Secretary.*
TIMOTHY F. ALLEN, M. D., New York, N. Y., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

TWENTY-THIRD SESSION

HELD AT CHICAGO, ILL., JUNE 7, 1870

DAVID THAYER, M. D., Boston, Mass., *President.*
J. J. YOULIN, M. D., Jersey City, N. J., *Vice-President.*
REUBEN LUDLAM, M. D., Chicago, Ill., *General Secretary.*
T. C. DUNCAN, M. D., Chicago, Ill., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

TWENTY-FOURTH SESSION

HELD AT PHILADELPHIA, PA., JUNE 6, 1871

D. H. BECKWITH, M. D., Cleveland, O., *President.*
J. D. TEMPLE, M. D., St. Louis, Mo., *Vice-President.*
REUBEN LUDLAM, M. D., Chicago, Ill., *General Secretary.*
T. C. DUNCAN, M. D., Chicago, Ill., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

TWENTY-FIFTH SESSION

HELD AT WASHINGTON, D. C., JUNE 21, 1872

I. T. TALBOT, M. D., Boston, Mass., *President.*
J. J. YOULIN, M. D., Jersey City, N. J., *Vice-President.*
ROBERT J. McCLATCHEY, M. D., Philadelphia, Pa., *General Secretary.*
BUSHROD W. JAMES, M. D., Philadelphia, Pa., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

TWENTY-SIXTH SESSION

HELD AT CLEVELAND, OHIO, JUNE 3, 1873

ALVIN E. SMALL, M. D., Chicago, Ill., *President.*
J. C. BURGHER, M. D., Pittsburg, Pa., *Vice-President.*
ROBERT J. McCLATCHEY, M. D., Philadelphia, Pa., *General Secretary.*
BUSHROD W. JAMES, M. D., Philadelphia, Pa., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

TWENTY-SEVENTH SESSION

HELD AT NIAGARA FALLS, N. Y., JUNE 9, 1874

JOHN J. YOULIN, M. D., Jersey City, N. J., *President.*
N. SCHNEIDER, M. D., Cleveland, O., *Vice-President.*
ROBERT J. McCLATCHEY, M. D., Philadelphia, Pa., *General Secretary.*
BUSHROD W. JAMES, M. D., Philadelphia, Pa., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

TWENTY-EIGHTH SESSION

HELD AT PUT-IN-BAY, OHIO, JUNE 16, 1875

WILLIAM H. HOLCOMBE, M. D., New Orleans, La., *President.*
L. E. OBER, M. D., La Crosse, Wis., *Vice-President.*
ROBERT J. McCLATCHEY, M. D., Philadelphia, Pa., *General Secretary.*
BUSHROD W. JAMES, M. D., Philadelphia, Pa., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

TWENTY-NINTH SESSION

HELD AT PHILADELPHIA, PA., JUNE 26 TO JULY 1, 1876, IN CONJUNCTION WITH THE WORLD'S HOMŒOPATHIC CONVENTION; THE OFFICERS OF THE INSTITUTE BEING CONSTITUTED THE OFFICERS OF THE CONVENTION.

CARROLL DUNHAM, M. D., Irvington-on-Hudson, N. Y., *President.*
E. C. FRANKLIN, M. D., St. Louis, Mo., *Vice-President.*
ROBERT J. McCLATCHEY, M. D., Philadelphia, Pa., *General Secretary.*
T. C. DUNCAN, M. D., Chicago, Ill., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

THIRTIETH SESSION

HELD AT LAKE CHAUTAUQUA, N. Y., JUNE 26, 1877

E. C. FRANKLIN, M. D., St. Louis, Mo., *President.*
T. P. WILSON, M. D., Cincinnati, O., *Vice-President.*
ROBERT J. McCLATCHEY, M. D., Philadelphia, Pa., *General Secretary.*
JOSEPH C. GUERNSEY, M. D., Philadelphia, Pa., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

THIRTY-FIRST SESSION

HELD AT PUT-IN-BAY, OHIO, JUNE 18, 1878

JOHN C. BURGHER, M. D., Pittsburg, Pa., *President.*
J. C. SANDERS, M. D., Cleveland, O., *Vice-President.*
ROBERT J. McCLATCHEY, M. D., Philadelphia, Pa., *General Secretary.*
JOSEPH C. GUERNSEY, M. D., Philadelphia, Pa., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

THIRTY-SECOND SESSION

HELD AT LAKE GEORGE, N. Y., JUNE 17, 1879

CONRAD WESSELHOEFT, M. D., Boston, Mass., *President.*
N. FRANCIS COOKE, M. D., Chicago, Ill., *Vice-President.*
ROBERT J. McCLATCHEY, M. D., Philadelphia, Pa., *General Secretary.*
JOSEPH C. GUERNSEY, M. D., Philadelphia, Pa., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

THIRTY-THIRD SESSION

HELD AT MILWAUKEE, WIS., JUNE 18, 1880

T. P. WILSON, M. D., Ann Arbor, Mich., *President.*
GEORGE A. HALL, M. D., Chicago, Ill., *Vice-President.*
J. C. BURGHER, M. D., Pittsburg, Pa., *General Secretary.*
J. H. McCLELLAND, M. D., Pittsburg, Pa., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

THIRTY-FOURTH SESSION

HELD AT BRIGHTON BEACH, N. Y., JUNE 14, 1881

J. W. DOWLING, M. D., New York, N. Y., *President.*
W. H. BREYFOGLE, M. D., Louisville, Ky., *Vice-President.*
J. C. BURGHER, M. D., Pittsburg, Pa., *General Secretary.*
J. H. McCLELLAND, M. D., Pittsburg, Pa., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

THIRTY-FIFTH SESSION

HELD AT INDIANAPOLIS, IND., JUNE 13, 1882

W. L. BREYFOGLE, M. D., Louisville, Ky., *President.*
BUSHFORD W. JAMES, M. D., Philadelphia, Pa., *Vice-President.*
J. C. BURGHER, M. D., Pittsburg, Pa., *General Secretary.*
JOSEPH C. GUERNSEY, M. D., Philadelphia, Pa., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

THIRTY-SIXTH SESSION

HELD AT NIAGARA FALLS, N. Y., JUNE 19, 1883

BUSHROD W. JAMES, M. D., Philadelphia, Pa., *President.*
O. S. RUNNELLS, M. D., Indianapolis, Ind., *Vice-President.*
J. C. BURGHER, M. D., Pittsburg, Pa., *General Secretary.*
T. M. STRONG, M. D., Ward's Island, N. Y., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

THIRTY-SEVENTH SESSION

HELD IN DEER PARK, MD., JUNE 17, 1884

JOHN C. SANDERS, M. D., Cleveland, O., *President.*
T. F. ALLEN, M. D., New York, N. Y., *Vice-President.*
J. C. BURGHER, M. D., Pittsburg, Pa., *General Secretary.*
T. M. STRONG, M. D., Ward's Island, N. Y., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

THIRTY-EIGHTH SESSION

HELD AT ST. LOUIS, MO., JUNE 2, 1885

TIMOTHY F. ALLEN, M. D., New York, N. Y., *President.*
A. C. COWPERTHWAITE, M. D., Iowa City, Ia., *Vice-President.*
J. C. BURGHER, M. D., Pittsburg, Pa., *General Secretary.*
T. M. STRONG, M. D., Ward's Island, N. Y., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

THIRTY-NINTH SESSION

HELD AT SARATOGA SPRINGS, N. Y., JUNE 28, 1886

O. S. RUNNELLS, M. D., Indianapolis, Ind., *President.*
A. I. SAWYER, M. D., Monroe, Mich., *Vice-President.*
J. C. BURGHER, M. D., Pittsburg, Pa., *General Secretary.*
T. M. STRONG, M. D., Ward's Island, N. Y., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

FORTIETH SESSION

HELD AT SARATOGA SPRINGS, N. Y., JUNE 27, 1887

F. H. ORME, M. D., Atlanta, Ga., *President.*
A. R. WRIGHT, M. D., Buffalo, N. Y., *Vice-President.*
J. C. BURGHER, M. D., Pittsburg, Pa., *General Secretary.*
T. M. STRONG, M. D., Ward's Island, N. Y., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

FORTY-FIRST SESSION

HELD AT NIAGARA FALLS, N. Y., JUNE 29, 1888

A. C. COWPERTHWAITE, M. D., Iowa City, Ia., *President.*
N. SCHNEIDER, M. D., Cleveland, O., *Vice-President.*
PEMBERTON DUDLEY, M. D., Philadelphia, Pa., *General Secretary.*
T. M. STRONG, M. D., Ward's Island, N. Y., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

FORTY-SECOND SESSION

HELD AT MINNETONKA BEACH, MINN., JUNE 24, 1889

SELDON H. TALCOTT, M. D., Middletown, N. Y., *President.*
THEO. Y. KINNE, M. D., Paterson, N. J., *Vice-President.*
PEMBERTON DUDLEY, M. D., Philadelphia, Pa., *General Secretary.*
T. M. STRONG, M. D., Ward's Island, N. Y., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

FORTY-THIRD SESSION

HELD AT WAUKESHA, WIS., JUNE 16, 1890

ALFRED I. SAWYER, M. D., Monroe, Mich., *President.*
J. D. BUCK, M. D., Cincinnati, O., *Acting President.*
CHESTER G. HIGBEE, M. D., St. Paul, Minn., *Vice-President.*
PEMBERTON DUDLEY, M. D., Philadelphia, Pa., *General Secretary.*
T. M. STRONG, M. D., Macon Ga., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

[NOTE.—The appointment of an Acting President was made necessary by the illness of the President and the absence of the Vice-President.]

FORTY-FOURTH SESSION

HELD AT ATLANTIC CITY, N. J., IN CONJUNCTION WITH THE FOURTH INTERNATIONAL HOMŒOPATHIC CONGRESS, JUNE 16, 1891

THEO. Y. KINNE, M. D., Paterson, N. J., *President.*
JAMES H. McCLELLAND, Pittsburg, Pa., *Vice-President.*
PEMBERTON DUDLEY, M. D., Philadelphia, Pa., *General Secretary.*
T. M. STRONG, M. D., Macon Ga., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*
T. FRANKLIN SMITH, M. D., New York, N. Y., *Assistant Treasurer.*

FORTY-FIFTH SESSION

HELD AT WASHINGTON, D. C., JUNE 13, 1892

THEO. Y. KINNE, M. D., Paterson, N. J., *President.*
JAMES H. McCLELLAND, M. D., Pittsburg, Pa., *Vice-President.*
PEMBERTON DUDLEY, M. D., Philadelphia, Pa., *General Secretary.*
T. M. STRONG, M. D., Macon, Ga., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*

FORTY-SIXTH SESSION

HELD AT CHICAGO, ILL., 1893

JAMES H. McCLELLAND, M. D., Pittsburg, Pa., *President.*
C. E. FISHER, M. D., Chicago, Ill., *First Vice-President.*
MILLIE J. CHAPMAN, M. D., Pittsburg, Pa., *Second Vice-President.*
PEMBERTON DUDLEY, M. D., Philadelphia, Pa., *General Secretary.*
T. M. STRONG, M. D., Macon, Ga., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*
T. FRANKLIN SMITH, M. D., New York, N. Y., *Assistant Treasurer.*

FORTY-SEVENTH SESSION

(FIFTIETH ANNIVERSARY)

HELD AT DENVER, COLO., 1894

JAMES H. McCLELLAND, M. D., Pittsburg, Pa., *President.*
C. E. FISHER, M. D., Chicago, Ill., *First Vice-President.*
MILLIE J. CHAPMAN, M. D., Pittsburg, Pa., *Second Vice-President.*
PEMBERTON DUDLEY, M. D., Philadelphia, Pa., *General Secretary.*
T. M. STRONG, M. D., Macon, Ga., *Provisional Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*
T. FRANKLIN SMITH, M. D., New York, N. Y., *Assistant Treasurer.*

FIFTY-FIRST SESSION.

HELD AT NEWPORT, R. I., 1895

CHARLES E. FISHER, M. D., Chicago, Ill., *President.*
J. B. GREGG CUSTIS, M. D., Washington, D. C., *First Vice-President.*
EUGENE F. STORKE, M. D., Denver, Colo., *Second Vice-President.*
EUGENE H. PORTER, M. D., New York, *General Secretary.*
FRANK KRAFT, M. D., Cleveland, O., *Recording Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*
T. FRANKLIN SMITH, M. D., New York, N. Y., *Assistant Treasurer.*

FIFTY-SECOND SESSION

HELD AT DETROIT, MICH., 1896

PEMBERTON DUDLEY, M. D., Philadelphia, Pa., *President.*
D. A. MACLACHLAN, M. D., Detroit, Mich., *First Vice-President.*
J. C. BUDLONG, M. D., Providence, R. I., *Second Vice-President.*
EUGENE H. PORTER, M. D., New York, *General Secretary.*
FRANK KRAFT, M. D., Cleveland, O., *Recording Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*
T. FRANKLIN SMITH, M. D., New York, N. Y., *Assistant Treasurer.*

FIFTY-THIRD SESSION

HELD AT BUFFALO, N. Y., 1897

J. B. GREGG CUSTIS, M. D., Washington, D. C., *President.*
CHAS. E. WALTON, M. D., Cincinnati, O., *First Vice-President.*
C. C. MILLER, M. D., Detroit, Mich., *Second Vice-President.*
EUGENE H. PORTER, M. D., New York, *General Secretary.*
FRANK KRAFT, M. D., Cleveland, O., *Recording Secretary.*
E. M. KELLOGG, M. D., New York, N. Y., *Treasurer.*
T. FRANKLIN SMITH, M. D., New York, N. Y., *Assistant Treasurer.*

FIFTY-FOURTH SESSION

HELD AT OMAHA, NEB., 1898

A. R. WRIGHT, M. D., Buffalo, N. Y., *President.*
WM. E. GREEN, M. D., Little Rock, Ark., *First Vice-President.*
CH. GATCHELL, M. D., Chicago, Ill., *Second Vice-President.*
EUGENE H. PORTER, M. D., New York, *General Secretary.*
FRANK KRAFT, M. D., Cleveland, O., *Recording Secretary.*
E. M. KELLOGG, 115 East 37th Street, New York, N. Y., *Treasurer.*
T. FRANKLIN SMITH, M. D., New York, N. Y., *Assistant Treasurer.*

FIFTY-FIFTH SESSION

HELD AT ATLANTIC CITY, N. J., 1899

BENJ. F. BAILEY, M. D., Lincoln, Neb., *President.*
A. B. NORTON, M. D., New York, *First Vice-President.*
SARAH J. MILLSOP, M. D., Bowling Green, Ky., *Second Vice-President.*
EUGENE H. PORTER, M. D., New York, *General Secretary.*
FRANK KRAFT, M. D., Cleveland, O., *Recording Secretary.*
E. M. KELLOGG, M. D., 115 East 37th Street, New York, N. Y., *Treasurer.*
T. FRANKLIN SMITH, M. D., New York, N. Y., *Assistant Treasurer.*

FIFTY-SIXTH SESSION

HELD AT WASHINGTON, D. C., 1900

CHAS. E. WALTON, M. D., Cincinnati, O., *President.*
JOSEPH P. COBB, M. D., Chicago, Ill., *First Vice-President.*
NANCY T. WILLIAMS, M. D., Augusta, Me., *Second Vice-President.*
EUGENE H. PORTER, M. D., New York, *General Secretary.*
WILSON A. SMITH, M. D., Morgan Park, Ill., *Recording Secretary.*
T. FRANKLIN SMITH, M. D., 264 Lenox Avenue, New York, N. Y., *Treasurer.*

FIFTY-SEVENTH SESSION

HELD AT RICHFIELD SPRINGS, N. Y., 1901

A. B. NORTON, M. D., New York, N. Y., *President.*
GEO. ROYAL, M. D., Des Moines, Ia., *First Vice-President.*
FLORENCE N. WARD, M. D., San Francisco, Cal., *Second Vice-President.*
EUGENE H. PORTER, M. D., New York, *General Secretary.*
T. FRANKLIN SMITH, M. D., 264 Lenox Avenue, New York, N. Y., *Treasurer.*
WILSON A. SMITH, M. D., Morgan Park, Ill., *Recording Secretary.*

FIFTY-EIGHTH SESSION.

HELD AT CLEVELAND, O., JUNE 17, 1902

JAMES C. WOOD, A. M., M. D., Cleveland, O., *President.*
EDWARD BEECHER HOOKER, M. D., Hartford, Conn., *First Vice-President.*
EDWARD Z. COLE, M. D., Baltimore, Md., *Second Vice-President.*
CH. GATCHELL, M. D., Chicago, *General Secretary.*
T. FRANKLIN SMITH, M. D., New York, N. Y., *Treasurer.*
WILSON A. SMITH, M. D., Morgan Park, Ill., *Recording Secretary.*

FIFTY-NINTH SESSION

HELD AT BOSTON, MASS., JUNE 22–27, 1903

JOS. P. COBB, M. D., Chicago, *President.*
H. F. BIGGAR, M. D., Cleveland, O., *First Vice-President.*
M. BELLE BROWN, M. D., New York, *Second Vice-President*
CH. GATCHELL, M. D., Chicago, *Secretary.*
T. FRANKLIN SMITH, M. D., New York, *Treasurer.*
J. RICHEY HORNER, M. D., Cleveland, O., *Recording Secretary.*

CONSTITUTION AND BY-LAWS

CONSTITUTION AND BY-LAWS

CONSTITUTION

ADOPTED JUNE 19, 1902

ARTICLE I.—*Name and Object.*

This association shall be styled the American Institute of Homœopathy, and its object the improvement of Homœopathic therapeutics and all other departments of medical science.

ARTICLE II.—*Members.*

The Institute shall consist of a central body and sectional societies whose members shall also be members of the Institute.

ARTICLE III.—*Officers.*

The Officers of the Institute shall be a President, two Vice-Presidents, who shall be designated First and Second; a Secretary, a Treasurer and a Registrar, with such other officers as shall be designated by the by-laws, to be chosen at such time, in such manner, for such period, and with such duties as the by-laws shall ordain.

ARTICLE IV.—*Seal.*

The Institute shall have and use one common seal, with a suitable device and inscription.

ARTICLE V.—*Amendments.*

This Constitution may be altered or amended by a vote of two-thirds of all members present at the regular annual meeting, provided that notice of such alteration or amendment shall have been given in writing at any meeting of a previous annual session of the Institute.

BY-LAWS

ADOPTED JUNE 19, 1902

ARTICLE I.—*Meetings.*

This Institute shall hold at least one session in each year, at such time and place as may be determined upon from time to time.

ARTICLE II.—*Officers.*

SECTION 1. The officers shall be elected by ballot at each annual session of the Institute, and shall enter upon their respective duties at the close of the session at which they are elected, excepting the Secretary, whose term of office shall expire upon the first day of January following.

SECTION 2. The officers of the Institute, viz., the President, Vice-Presidents, Secretary, Treasurer, and Registrar, shall constitute an Executive Committee, which shall arrange the business of the session, attend to matters of business not otherwise especially provided for, and perform such other duties as may by vote of the Institute devolve upon them. They shall have power to fill any vacancies occurring in the election of officers.

SECTION 3. The Secretary shall be paid an annual salary of $1,000.

ARTICLE III.—*Duties of Officers.*

SECTION 1. The President shall preside at the meetings of the Institute and perform the duties usually pertaining to his office, together with such other duties as may by vote of the Institute devolve upon him. He shall sign all certificates of membership. He shall deliver an address at the opening of each session, and make such suggestions as he may deem necessary for the Institute to take action on during the session; and he may also consider any subject relating to medical science.

SECTION 2. The Vice-Presidents in their order shall perform the duties of the President in his absence or disability.

SECTION 3. The Secretary shall keep a record of the proceedings of the meetings, conduct the correspondence of the Institute, issue notices of meetings, notify members of their election, sign certificates, and perform such other duties as the Institute may direct. It shall further be the duty of the Secretary to send to each Homœopathic journal published in the country, within two weeks after the adjournment of the annual meeting, a list of the officers for the ensuing year, together with the officers of the Sectional Societies.

SECTION 4. It shall be the special duty of the Secretary to make or provide stenographic reports of all scientific discussions of the Institute and of its bureaus, and of all Standing Committees. He shall send copies of these scientific discussions for revision and correction to their

authors, respectively, who shall be required to return them within one week after their reception for publication in the Transactions. If not so returned the original record shall be used by the Secretary. The compensation and necessary expenses connected with such reports shall be paid by the Institute upon presentation and approval of the certified accounts.

SECTION 5. The Treasurer shall receive all money belonging to the Institute, and make all disbursements under the recommendation of the Executive Committee. He shall furnish at each annual meeting a written report of the condition of the finances.

SECTION 6. The Registrar shall attend to the registration of members present at the annual sessions, the preparation of a daily roster, and the distribution of the appropriate badges to members and visitors. He shall make a full report to the Secretary at the close of the annual meeting.

ARTICLE IV.—*Censors.*

SECTION 1. There shall be a Board of Censors, consisting of five members (three of which shall constitute a quorum), who shall receive and examine the credentials of candidates for membership, and report to the Institute for election such as may be found properly qualified. One member of said Board shall be elected by ballot at each annual session, to serve for five years from the first day of January next succeeding said election.

ARTICLE V.—*Membership.*

SECTION 1. Candidates for membership shall present to the Board of Censors a certificate of three members of the Institute that the applicant has pursued a regular course of medical studies according to the requirements of the existing institutions of this country, and sustains a good moral character and professional standing. Such certificate shall state when and where the applicant obtained a diploma. If found qualified, the candidate may be elected a member, provided the name of said candidate shall have been presented by the Board of Censors before the last day of the regular session. No person shall be considered a member, however, before paying an admission fee of two dollars, and the annual dues, which shall entitle him to a certificate of membership.

SECTION 2. No physician, graduate subsequent to the year 1891, shall be eligible to membership, unless said graduation has followed three full annual courses of didactic and clinical lectures of not less than six months each.

SECTION 3. Members shall pay annually the sum of five dollars toward defraying the expenses of the Institute. The Transactions of the Institute shall be sent to those members only who have paid their dues.

SECTION 4. Members neglecting the payment of dues for three years, after proper notification from the Treasurer, shall have their names dropped from the roll of membership. Any person thus dropped shall have the privilege of reinstatement by paying all arrearages, on recommendation of the Board of Censors.

SECTION 5. The Executive Committee shall be authorized to remit, *sub silentia,* the dues of those who, for ten years, have been in good membership and have paid their dues during that time, provided that such members are unable to continue the payment of their annual dues.

SECTION 6. All members of the Institute who have maintained twenty-five consecutive years of membership shall be considered Senior Members, and be exempt from the payment of annual dues; and the names of such members shall be printed first in the list of members, in capital letters.

SECTION 7. Any foreign physician may be elected a Corresponding Member of the Institute at any annual meeting, on recommendation of the Board of Censors, and shall have all the privileges of members, except voting and eligibility to office.

SECTION 8. The Institute may at any annual meeting elect as Honorary Members, not to exceed five in one year, any foreign physicians who may be judged worthy from their superior attainments in medicine; provided, that the names of persons proposed for Honorary Membership shall have been presented at a previous annual meeting. Such Honorary Members shall have all the privileges of members except voting and eligibility to office.

SECTION 9. The Institute may, at any annual meeting, elect as Honorary Associate Members, not to exceed three in one year, any persons not members of the medical profession, who have been in any way of special service to science and humanity, and particularly those who have been special patrons of homœopathy, and said Honorary Associate Members shall have all the privileges of Honorary Members.

SECTION 10. Any physician properly accredited as a delegate shall be admitted during the session of the Institute to all the privileges of members, except voting and eligibility to office, on the following basis:

First.—From every association composed of more than fifty members from different States, two delegates, with an additional delegate for every twenty members.

Second.—From every State society, two delegates, with an additional delegate for every twenty members.

Third—From every country or local society, one delegate.

Fourth.—From every hospital, asylum for the insane, or dispensary actually established, one delegate.

Fifth.—From every medical journal established, one delegate.

Sixth.—From every college associated with the Institute, two delegates; said delegates to constitute the Intercollegiate Committee of the Institute.

ARTICLE VI.—*Bureaus.*

SECTION 1. The following bureaus shall be appointed as hereinafter provided for:

A—Materia Medica and General Therapeutics.

B—Clinical Medicine and Pathology.

C—Homœopathy.

D—Pedology.

E—Sanitary Science and Public Health.

SECTION 2. Each of these bureaus shall consist of not less than five members.

SECTION 3. The chairman of each bureau, as soon as possible after appointment, shall select his associates and complete the organization of his bureau by the appointment of a secretary. He shall, within one month after his appointment, send to the Secretary a list of the officers and members of his bureau. In case of failure to comply with the provisions of this section the President is authorized to appoint another chairman. And the presidents of the sectional societies shall also conform to the requirement laid upon the chairman of bureaus, in matter of making report to the Secretary.

SECTION 4. No member shall be appointed to more than one bureau in one year. If any member's name occurs in more than one bureau he shall be notified by the Secretary to elect the one to which he wishes to be assigned. No chairman shall serve as such two successive years.

SECTION 5. Vacancies occurring in any bureau may be filled by the chairman, who shall give immediate notice thereof to the Secretary.

SECTION 6. The Institute shall recognize the following Sectional Societies as parts of its body:

(a) The Surgical and Gynecological Society of the American Institute of Homœopathy.

(b) The Ophthalmological, Otological and Laryngological Society of the American Institute of Homœopathy.

(c) The Obstetrical Society of the American Institute of Homœopathy.

(d) The Electro-Therapeutical Society of the American Institute of Homœopathy; and such other Societies as may be formed from time to time, under the rules and regulations of the Institute.

SECTION 7. Each Sectional Society shall perfect its own organization, make its own constitution and by-laws, elect its own officers and conduct its own deliberations. It shall have self-government so far as its organization and conduct of its affairs is concerned, but shall be strictly under the rule of the Institute in all matters of publication and other requirements of general welfare.

SECTION 8. The meetings of the Sectional Societies shall be held annually at the same place and time as the Institute, but shall not conflict with the sessions of the Institute except as permitted by the Executive Committee of the Institute.

SECTION 9. The President of each Sectional Society shall present to the general session, from time to time, such matters as may be of general interest to the profession.

SECTION 10. No constitution or by-laws of any Sectional Society shall in any manner conflict with the constitution or by-laws of the Institute.

ARTICLE VII.—*Committees.*

SECTION 1. (a) Organization, Registration and Statistics.

(b) International State Committee.

(c) International Bureau of Homœopathy.

(d) Intercollegiate.

(e) Drug Provings.

(f) Committee on Medical Examining Boards and Medical Legislation.

SECTION 2. Committee "B" shall consist of two members from each State, to be appointed by the respective State societies, provided such appointees are members of the Institute; the Chairman shall be elected by the committee.

Committee "D" shall consist of two delegates to be appointed by each College represented in the Institute, and shall appoint its own Chairman.

Committee "E" shall consist of five members, one to be appointed each year, and the term of service of each member in this committee to be five years.

The remaining standing committees shall consist of at least five members each, who shall serve for one year.

SECTION 3. There shall also be appointed each year Committees on Local Arrangements, on Transportation, on Press, on Resolutions and Business, and on the Memorial Service, of not less than three members each. The duties of said committees shall be such as are indicated by their respective titles. All resolutions presented to the Institute shall be referred without debate to the Committee on Resolutions, except those resolutions emanating from standing committees.

SECTION 4. The President, so far as these by-laws require, shall appoint each of the committees provided for in this article.

SECTION 5. All committees or members appointed to perform any special work under the authority of this Institute shall serve without compensation, unless otherwise specifically ordered.

SECTION 6. The President shall have the power to fill any vacancies that may occur in any committee during or between the sessions of the Institute. Vacancies and elective offices may be filled by nomination and election in open meeting during any session of the Institute, the members-elect to hold such office until the arrival of the regular occupant. The Executive Committee may, at any time when deemed necessary, fill any vacancy occurring in an elective office between the sessions of the Institute, such appointee to hold office until the opening of the next regular session. Absence from the session of the Institute shall constitute a vacancy.

ARTICLE VIII.—*Committee on Publication.*

SECTION 1. The Committee on Publication shall consist of three members of the Institute, to be appointed annually by the Executive Committee, whose duty shall be to pass upon all papers or reports presented to the Institute, and the decision of such Committee as to the publication of papers or reports shall be final.

SECTION 2. No report or paper referred to the Committee on Publication shall be rejected except with the formal concurrence of a majority of said Committee. All papers so rejected shall be returned to their authors by the Secretary.

SECTION 3. The Transactions of the Institute shall be issued by the Secretary, under the direction of the Committee on Publication, within

five months after the close of the session, and copies shall be delivered to those entitled to them, without individual expense.

SECTION 4. There shall be published in each annual volume of the Transactions: 1. A list of senior members arranged according to their years of membership. 2. An alphabetical list of members, including the names of senior members in Capitals. 3. A list of members classified by States. The complete list of members of the Institute from its organization, and its Code of Ethics, shall be published every five years.

SECTION 5. The Secretary shall furnish editorial copies of the Transactions to such Homœopathic journals as are sent to the Institute in exchange, and to other selected journals.

SECTION 6. The Secretary shall send copies of the Statistical Reports to all societies, hospitals, and dispensaries that make reports to the Committee on Organization, Registration and Statistics.

ARTICLE IX.—*Rules of Order.*

SECTION 1. The names and residences of all applicants for membership shall be announced in alphabetical order by the Board of Censors in open session, at least six hours before their election is voted upon.

SECTION 2. The Report of the Necrologist shall be presented in connection with the Report of the Committee on Memorial Service.

SECTION 3. The time allotted to any committee for the presentation of its report shall not exceed fifteen minutes. No report shall be received from any Committee except in writing.

SECTION 4. No report or paper shall be received by the Institute in an incomplete or unfinished condition, and no paper shall be published in the Transactions which has been published previous to its presentation to the Institute, or which is not handed to the Secretary before the close of the session.

SECTION 5. Meetings of the bureaus may be held at the call of its Chairman, provided such meetings be not held during the sittings of the Institute, nor during the meetings of the other bureaus, except as provided in the adopted Order of Business.

SECTION 6. In all discussions no speaker shall be allowed more than five minutes, nor to speak more than once upon the same subject, except by vote of consent taken in the usual manner.

SECTION 7. At the conclusion of the work of each bureau its Chairman shall hand to the Secretary its reports, addresses, and papers, which shall remain in his hands until the Transactions are printed.

SECTION 8. The election of officers for the ensuing year shall take place on the second morning of the session, at 10 a. m., Sunday excepted. The nominations shall be made on the first morning of the session, at 10 a. m., in the following way: Nomination papers shall be furnished by the Secretary on the first day of the session, and any person receiving the indorsement of ten members shall be considered a nominee, provided no indorser's name appear on more than one paper for that office. If no nomination papers are handed in, it shall be the duty of the Executive Committee to see that at least one paper shall be prepared for each of the elective officers. No nomination shall be considered after the

President has declared the nomination closed. These papers shall immediately be placed in charge of a special committee of three, to be appointed by the President, to which shall be added the Treasurer and Registrar, *ex officio.* The duties of the committee shall be, first, to prepare an official ballot, on which the names of all nominees shall be placed in alphabetical order for the office to which they are nominated. Second, to take general charge of the election, which shall occur on the second morning of the Institute session, excepting Sunday, at 10 a. m., the polls to be open two hours, and in such manner as not to interfere with the general work of the session. Third, in conjunction with the Secretary and Treasurer, to prepare a roster of members in good standing, which shall be used as a check list and ultimate judge as to voting and qualifications of members. Upon declaration of the result, should no election be had for any office, the Institute shall, in open session, elect from two candidates receiving the highest number of votes which person it prefers. Members shall vote by the method known as the Australian system, *i. e.,* putting a cross-mark opposite the name of the person voted for. Should more marks be placed than the office calls for, such ballot shall be invalidated, so far as that particular office is concerned. The inspectors of election shall report when and as the Institute may direct.

SECTION 9. The determination of the next place of meeting shall take place as follows: All invitations for places of meeting shall be forwarded to the Executive Committee at least ninety days before the date of the annual session, whereupon the Committee shall investigate the various places, with reference to accommodations, hotel-rates, railroad facilities, and obtain all necessary information. The Committee's report shall be made to the Institute, when the location shall be determined.

ARTICLE X.

All complaints relating to violations of the Code of Ethics for the Institute shall be referred to the Senate of Seniors for consideration and adjustment, and its decision shall be final, without further action of the Institute; except in such cases as require disciplinary action, when the Senate shall report to the Institute with recommendations.

Questions in dispute, having a bearing upon the general good of Homœopathy, which may be brought before the Institute for review and judgment, shall be referred to the Senate of Seniors for adjustment. In order to appeal from its decision a two-thirds vote of members present and voting shall be necessary, said vote to be had without debate; all appeals thus ordered shall be heard at a special hour set for the purpose, and shall be considered in Executive Session.

ARTICLE XI.—*Amendments.*

These By-Laws may be altered or amended by a vote of two-thirds of the members present at any session of the annual meeting, provided that notice of such alteration or amendment shall have been given at the previous annual meeting. They may be suspended at any session of the annual meeting by a two-thirds vote of the members present.

STANDING RESOLUTIONS

1. *Resolved,* That the American Institute of Homœopathy does not necessarily indorse the doctrine contained in the reports of committees by accepting and publishing such reports with the Proceedings. *Adopted June 4, 1867.*

2. *Resolved,* That this Institute condemns the action of any college which graduates an unsuccessful candidate from another college, unless he attends at least one full course of lectures at the college where he applies for a degree. *Adopted June 30, 1886.*

3. *Resolved,* That the Committee on Local Arrangements be instructed to respect the working hours of the Institute session, and to make no provisions for entertainments to the members except during the intermission of the session. *Adopted June 20, 1890.*

4. *Resolved,* That beginning with the session of 1895-96 all colleges recognized by the Intercollegiate Committee of the American Institute of Homœopathy shall require attendance on four courses of lectures of not less than six months each, in separate years. *Adopted June 20, 1894.*

5. *Resolved,* That while the Intercollegiate Committee of the American Institute of Homœopathy would regard with favor any movement looking to the establishment of chairs of Homœopathic Therapeutics or Materia Medica in any college or university in which such chairs do not now exist, it would most unqualifiedly condemn any movement to transfer any existing Homœopathic institution to any old-school college in a manner which involves the surrender of its distinctive name, and under conditions which do not secure the recognition of distinctive chairs of Homœopathy. *Adopted June 20, 1894.*

6. *Resolved,* That the Executive Committee of the American Institute of Homœopathy be the Committee of Arrangements, with a local auxiliary committee, in order that the officers of the Institute may control the important matters connected with the meeting. *Adopted June 2, 1898.*

COMPLETE REPORT OF THE BOARD OF CENSORS

PHYSICIANS ELECTED TO MEMBERSHIP

ABBOTT, ALBERT FRANCIS.....Manchester, N. H.
Boston University School of Medicine, 1903.

ADSIT, JOSEPH S.....Hoopeston, Ill.
Chicago Homœopathic Medical College, 1891.

ALLEN, MILLSON RALEIGH.Cor. Monticello & Charlotte, Norfolk, Va.
Hahnemann Med. College of Philadelphia, 1890.

AMSDEN, HENRY HUBBARD.....33 Bank St., Attleboro, Mass.
Boston University School of Medicine, 1896.

BANGS, EDWIN MAYO .....East Newton, Boston, Mass.
Boston University School of Medicine, 1878.

BARRUS, CLARA.....State Homœopathic Hospital, Middletown, N. Y.
Boston University School of Medicine, 1888.

BARD, GEORGE PERCIVAL ..... Stafford Springs, Conn.
New York Homœopathic Medical College, 1900.

BARKER, EMILIE JONES..The Eliot, Washington St., Wellesley, Mass.
The New York Med. Coll. and Hosp. for Women, 1878.

BARNARD, ESTHER SUBIA....."Inter Pines," Goshen, N. Y.
Boston University School of Medicine, 1900.

BARTLETT, G. WALDRON.....167 Bay 28th St., Bensonhurst, N. Y.
New York Hom. Med. College and Flower Hosp., 1895.

BASSETT, ALICE HALEY.....2 Commonwealth Ave., Boston, Mass.
Boston University School of Medicine, 1898.

BIGGS, ELMER LEROY.....926 Central Ave., Hot Springs, Ark.
Dunham Medical College, 1901.

BISHOP, CHANNING.....Bristol, N. H.
Boston University School of Medicine, 1899.

BIXBY, ERNEST P.....Barre, Mass.
New York Homœopathic Medical College, 1897.

BLACKMORE, RICHARD, JR.....Main St., South Ashburnham, Mass.
Boston University School of Medicine, 1902.

BONGART, WALTER EUGENE.....278 Cabot, So. Beverly, Mass.
Boston University School of Medicine, 1883.

BRACKETT, ELIZABETH ANASTASIA..1458 Vermont St., Boston, Mass.
Boston University School of Medicine, 1891.

BROWN, E. WILTON.....Mt. Kisco, N. Y.
New York Homœopathic Medical College, 1894.

BROWNE, PROCTOR KINSMAN .....Granite Ave., Milton, Mass.
College of Physicians and Surgeons, Boston, 1884.

BUNN, FRANK CAULKINS.....139 Glenwood Av., E. Orange, N. J.
New York Homœopathic Medical College, 1889.

BURPEE, CARROLL COLBY.....5 Garnet St., Malden, Mass.
Boston University, 1896.

BUSH, CHARLES W. .....444 Massachusetts Ave., Boston, Mass.
Boston University, 1899.

BUTLER, DAVID P.....Rutland, Mass.
Boston University School of Medicine, 1898.

CALDWELL, WILLIAM.....7 John St., Providence, R. I.
Harvard Medical School, 1867.

CARR, GEORGE BYRON .....67 N. Commons St., Lynn, Mass.
Boston University Medical School, 1895.

CASTLE, CATHERINE WHITE.....5 Union Park, Boston, Mass.
Boston University School of Medicine, 1903.

CHADWELL, ORVILLE ROGERS.....80 E. Concord St., Boston, Mass.
Boston University School of Medicine, 1903.

CHANDLER, D. HENRY.....Cornwall-on-the-Hudson, N. Y.
New York Homœopathic Medical College, 1892.

CHAPMAN, HARRIET V. .....3809 Euclid Ave., E. Cleveland, Ohio.
Cleveland Medical College, 1896.

CLAPP, HERBERT C.....334 Commonwealth Ave., Boston, Mass.
Harvard Medical School, 1870.

CLIFT, EDWARD BUXTON.....4 Washington St., Fairhaven, Vt.
Hahnemann Medical College, Philadelphia, 1900.

COFFIN, GEORGE H.....Hopedale, Mass.
Boston University School of Medicine, 1903.

COLE, ANNA BESSIE TAYLOR- ..... Somerville, Mass.
Boston University School of Medicine, 1884.

CRANE, CLARENCE,.....228 Huntington Ave., Boston, Mass.
Boston University School of Medicine, 1900.

CURRIER, MARY BARNARD.....345 Broadway, Somerville, Mass.
Boston University School of Medicine, 1893.

DALRYMPLE, ALFRED TOMLINSON.....171 K St., Boston, Mass.
Boston University, 1899.

DAVIES, GEORGE ALLEN.....309 Liberty St., Warren, Pa.
Hahnemann, Philadelphia, 1900.

DEAN, HUBERT TIDD.....8 Chester St., Readville, Mass.
Boston University School of Medicine, 1903.

DEAN, MARY MEAD.....901 N. Calvert St., Baltimore, Md.
Southern Homœopathic Medical College, 1901.

DEFRIEZ, WILLIAM PEABODY....537 Washington St., Brookline, Mass.
Boston University School of Medicine, 1881.

DRAKE, HARLOW B.....32 Adams St., Detroit, Mich.
Hahnemann Med. College of Philadelphia, Pa., 1873.

EDGAR, WILLIAM LADELL.....503 Main St., Athol, Mass.
Hahnemann Medical College of Philadelphia, 1894.

EKINGS, FRANK T.....197 Simmon St., Paterson, N. J.
New York Hom. Med. College, 1903.

EVANS, CHARLES HORACE.....739 N. Hoyne Ave., Chicago, Ill.
Homœopathic Med. College of Pennsylvania, 1869.

EVELITH, FRED SHAILER.....Searsport, Me.
Boston University School of Medicine, 1899.

FERGUSON, FRANKLIN ARCHIE.....Trull Hospital, Biddeford, Me.
Boston University School of Medicine, 1902.

FESSENDEN, CHARLES HILL....34 Pelham St., Newton Center, Mass.
Boston University School of Medicine, 1886.
FITZ-PATRICK, GILBERT.....100 State St., Chicago.
Chicago Homœopathic College, 1896.
FLETCHER, SAMUEL E.....96 Grape St., Chicopee, Mass.
Boston University School of Medicine, 1891.
FRENCH, WINSLOW BURRELL....164 Huntington Ave., Boston, Mass.
Boston University School of Medicine, 1891.
GANGLOFF, CHARLES L..Cor. Virginia Ave. & Maple Ter., Pittsburg.
Cleveland University of Medicine and Surgery, 1892.
GARRISON, HOWARD CHEW.....428 N. Fifth St., Camden, N. J.
Hahnemann Hom. Med. College of Philadelphia, 1894.
GLAZIER, FREDERICK PRENTISS.....12 Lincoln St., Hudson, Mass.
Boston University School of Medicine, 1883.
GOODWIN, EDWARD EVERETT.....31 Battle St., Brockton, Mass.
Boston University, 1899.
GRAHAM, MERRITT E.....1100 South Avenue, Rochester, N. Y.
University of Michigan, 1878.
HALL, CHARLES FRANCIS ADAMS..132 High St., Newburyport, Mass.
Boston University School of Medicine, 1898.
HAM, WILLIAM ADDISON.....32 Ward St., S. Boston, Mass.
Boston University Medical School, 1903.
HANDY, HARRIE DELMAR.....Harwich, Mass.
Hahnemann Medical College of Philadelphia, 1893.
HANSON, WILLIAM G.....27 Norwood St., Everett, Mass.
Boston University School of Medicine, 1878.
HARVEY, ALBION K.....71 High St., Somersworth, N. H.
Chicago Homœopathic Medical College, 1888.
HARVEY, FRANK T.....6 South Mano, Millford, Mass.
New York Homœopathic Med. College, 1893.
HARVEY, WALTER EMERSON....N. 10 Magazine St., Cambridge, Mass.
Hahnemann Med. College, Philadelphia, Pa., 1879.
HEMINGTON, J. GLENN.....87 W. Main St., Uniontown, Pa.
Cleveland Homœopathic Med. College, 1902.
HIGBIE, ANNIE S.....177 W. 73d St., New York, N. Y.
New York Med. Coll. and Hosp. for Women, 1903.
HIGGINS, JOHN M.....2 Mulberry St., Athens, Ohio.
Pulte Medical College, 1893.
HOFFMANN, WALTER KLOSS.....328 Fort St., W., Detroit, Mich.
Cleveland Homœopathic Medical College, 1901.
HOLMES, MANSFIELD SCOTT.....Oakland, Me.
Boston University, 1879.
HOLVERSON, HOWARD MELVIN.....Garretson, S. D.
Hahnemann of Chicago, 1901.
HOMER, HARRIET .....551 Massachusetts Ave., Boston, Mass.
Boston University School of Medicine, 1903.
HASKINS, BERTHA LADD.....494 Washington St., Dedham, Mass.
Boston University School of Medicine, 1896.
HINSON, JACOB MILLER .....601 Boylston St., Boston, Mass.
Hahnemann, Philadelphia, 1886.

HODSON, WALTER G.....Rutland, Vt.
Boston University School of Medicine, 1898.

HUTCHINSON, HENRY.....The Aberdeen, St. Paul, Minn.
Hahnemann Med. College of Philadelphia, Pa., 1874.

JACKSON, GEORGE V.....1618 Pacific Ave., Atlantic City, N. J.
Hahnemann Med. College of Philadelphia, 1899.

JEWETT, DAVID BALDWIN.....224 Alexander St., Rochester, N. Y.
New York Homœopathic Med. College and Hospital, 1902.

JOHNSON, ELMON R.....220 Clarendon St., Boston, Mass.
Boston University School of Medicine, 1895.

JOHNSTON, REUBEN THOMAS.....469 Cumberland St., Portland, Me.
Boston University School of Medicine, 1903.

JONES, ELBERT A.....78 Pleasant St., Worcester, Mass.
New York Hom. Med. Coll. and Hospital, 1892.

KERN, CHARLES BRUCE .....610 Columbia St., Lafayette, Ind.
Chicago Homœopathic Medical College, 1898.

KEMP, MALCOM EDWIN.....Oskaloosa, Iowa.
College of Hom. Med., University of Iowa, 1903.

KENNEY, HARRIET ELIZA.....508 Saratoga St., Cohoes, N. Y.
Boston University Medical School, 1896.

KING, WILLIAM D.....1046 Fifth Ave., Pittsburg, Pa.
Hahnemann Medical College, 1884.

KLEIN, AUGUST ANDREAS.....123 Blue Hill Ave., Boston, Mass.
Boston University School of Medicine, 1882.

KNOTT, HARRIET A. .....203-204 Avery Bldg., Saginaw, Mich.
New York Med. Coll. and Hosp. for Women, 1894.

LAIN, RACHEL B.....821 Marin St., Vallejo, Cal.
Hahnemann Medical College, Chicago, 1890.

LAKEMAN, MARY ROPER.....17 North State St., Salem, Mass.
Boston University School of Medicine, 1895.

LAMB, FRANCES GERTRUDE.....45 Portland St., Haverhill, Mass.
Boston University School of Medicine, 1893.

LANE, ORVILLE W.....267 Main St., Great Barrington, Mass.
Hahnemann Medical College, Philadelphia, 1887.

LEAVITT, MARY AUGUSTA. Mass. Hom. Hosp., E. Concord St., Boston.
Boston University School of Medicine, 1902.

LEE, WESLEY TERENCE.....254 Broadway, Somerville, Mass.
Boston University School of Medicine, 1898.

LEFEVERE, GEORGE L.....Mason Block, Muskegon, Mich.
Hahnemann Medical College, Chicago, Ill., 1891.

LEWIS, EDWIN RAY.....865 Central St., Franklin, Mass.
Boston University School of Medicine, 1903.

LOBDELL, ALBAN J.....Winchester, N. H.
New York Hom. Med. Coll. and Hosp., 1893.

MCDOUGALL, DUNCAN.....131 Main St., Haverhill, Mass.
Boston University School of Medicine, 1893.

MANN, ANNA ROOT.....Stamford Hall, Stamford, Conn.
Boston University School of Medicine, 1901.

MARDEN, WILMOT LEIGHTON.....171 Lewis St., Lynn, Mass.
Boston University School of Medicine, 1898.

MASON, GILBERT MCCLELLAN.....208 Neponset Ave., Boston, Mass.
Boston University School of Medicine, 1898.

MAXWELL, GEORGE B. .....38 High St., Chicopee Falls, Mass.
Chicago Hom. Medical College, 1894.

MAYNARD, HERBERT ERNEST.....76 Church St., Winchester, Mass.
Boston University School of Medicine, 1902.

MCDONALD, CHARLES DEARBORN.....958 Washington St., Bath, Me.
Boston University School of Medicine, 1901.

MCMICHAEL, JACOB E.....50 W. 89th St., New York, N. Y.
University of Buffalo, 1884.

MITCHELL, ROY ERNEST..State Hosp. for Insane, Middletown, N. Y.
Coll. of Hom. Med. and Surg., University of Minn., 1901.

MIZE, HARLAN E.....311 The Temple, Danville, Ill.
Chicago Homœopathic Medical College, 1895.

MORELAND, GEORGE BOLTON.....403 Smith Block, Pittsburg, Pa.
Hahnemann Medical College of Philadelphia, 1893.

MORRIS, FRANCES MORRIS.....138 Marlboro St., Boston, Mass.
Boston University School of Medicine, 1885.

NEALE, LILLIAN BELLE.....138 Marlboro St., Boston, Mass.
Boston University School of Medicine, 1898.

NEWTON, CARRIE E.....28 Holyoke St., Brewer, Me.
Boston University School of Medicine, 1898.

NICHOLS, FRANK IRWIN..108 Maplewood Terrace, Springfield, Mass.
New York Homœopathic Medical College, 1902.

NICHOLS, WALTER EDMOND....723 Washington St., Hoboken, N. J.
New York Homœopathic Medical College, 1903.

PAGE, CLARENCE VERNON.....Onawa, Iowa.
Iowa State University, 1902.

PALMER, JOHN THOMAS.....307 Congress St., Portland, Me.
Hahnemann Med. Coll. and Hosp., Chicago, Ill., 1880.

PERKINS, STELLA MANNING.....20 South Common, Lynn, Mass.
Boston University Medical School, 1880.

PHELPS, EDITH MINDWELL.....Calhoun, Ala.
Boston University School of Medicine, 1901.

PHILLIPS, EMMA ARABELLA .....142 High St., Pawtucket, R. I.
Boston University School of Medicine, 1881.

PHILLIPS, ROBERT SIMMONS.....62 Jackson St., Providence, R. I.
New York Homœopathic Medical Coll. and Hosp., 1900.

PHILLIPS, WM. H.....630 Rose Blvd., Cleveland, Ohio.
Cleveland Medical College, 1893.

PIERCE, HELEN FRANCES.....6 North Street, Plymouth, Mass.
Boston University School of Medicine, 1887.

POST, WALTER.....Bloomfield, N. J.
New York Homœopathic Medical College, 1899.

PRICE, WM. HARRISON..820 Mt. Hope Ave., Price Hill, Cincinnati, O.
Pulte Medical and Hospital of Cincinnati, 1903.

QUILLIAMS, FREDERICK F.....1821 Euclid Ave., Cleveland, Ohio.
Cleveland Homœopathic Med. College, 1897.

RAMBO, WILLIAM S.....43 Sophia St., Rochester, N. Y.
Hahnemann of Philadelphia, 1889.

RICHARDSON, ARTHUR HAYS.....39 E. 83d St., New York City.
New York Hom. Med. Coll. and Hosp., 1902.

ROBERTS, FRANK EUGENE.....100 Huntington Ave., Boston, Mass.
Boston University School of Medicine, 1902.

ROOT, STELLA A.....349 Atlantic St., Stamford, Conn.
New York Med. Coll. and Hosp. for Women, 1896.

ROOSEVELT, GILES FRANCIS.....2 Steele Block, Denver, Col.
Denver Homœopathic College, 1903.

SACKETT, HARRY ROBERT....251 North Hampton St., Holyoke, Mass.
New York Homœopathic Medical College, 1893.

SANDERS, CHARLES BARTON.....475 Westford St., Lowell, Mass.
Bowdoin, 1869.

SARGENT, CHARLES SAMUEL.....44 Pleasant St., Worcester, Mass.
Boston University School of Medicine, 1879.

SEARS, ELOISE A.....58 Adams St., Waltham, Mass.
Boston University, 1888.

SHEPHERD, HOVEY LEONARD.....31 Church St., Winchester, Mass.
Boston University, 1895.

SHIPMAN, LEANDER KENNY..41 Huntington St., New London, Conn.
New York Homœopathic Medical College, 1883.

SIMMONS, CLARA C.....407 Marlboro St., Boston, Mass.
Hahnemann Medical College, Chicago, 1885.

SIMONSON, JEREMIAH T.....46 W. 85th St., New York, N. Y.
New York Homœopathic Medical College, 1891.

SMITH, ERDIX T., JR.....Bradford, Vt.
Cleveland Hom. Med. Coll. and Dartmouth Coll., 1900-01.

STANSBURY, HENRY H.,.....88 Bedford St., Cumberland, Md.
Southern Homœopathic Medical School, 1896.

STEDMAN, JAMES PARKER.....55 W. Elm St., Brockton, Mass.
Boston University School of Medicine, 1882.

STEARNS, GUY B. .....168 W. 78th St., New York, N. Y.
New York Homœopathic College, 1900.

STEVENS, EDWIN DEARBORN ..... Francestown, N. H.
Boston University, 1895.

STOWELL, A. AUSTIN.....193 Broadway, Lawrence, Mass.
Pulte Med. College, Cincinnati, Ohio, 1902.

STREETER, HOWARD ALVERTUS.....178 High St., Clinton, Mass.
Boston University Medical School, 1898.

TAYLOR, JAMES RALPH, JR..175 Sydney St., Dorchester, Boston, Mass.
Boston University School of Medicine, 1903.

TENNEY, LILLA M. .....331 S. Third St., San Jose, Cal.
Hahnemann Med. College of the Pacific, 1902.

THOMAS, WILLIAM KILPACK.....427 Broadway, Cambridge, Mass.
Boston University School of Medicine, 1903.

THOMPSON, CHARLES EDWARD PERCY.2 Commonwealth Ave., Boston.
Boston University School of Medicine, 1903.

TITUS, EMILY NEWBOLD.....660 Congress St., Portland, Me.
New York Med. Coll. and Hosp. for Women, 1894.

VANARTSDALEN, CHRISTOPHER.....Ashbourne, Pa.
Hahnemann, Philadelphia, Pa., 1874.
WAKEFIELD, SAM BELL..Metropol. Hosp., Blackwell's Island, N. Y.
.....New York, N. Y.
Hahnemann Med. Col. and Hosp., Philadelphia, 1902.
WEBSTER, EDGAR M.....9139 Commercial Ave., Chicago, Ill.
Stirling Medical College, 1884.
WITHERBEE, LUCY EMMA.....2 King St., Worcester, Mass.
Boston University School of Medicine, 1899.
WIGGIN, HENRY MAYHEW.....Main St., Whitefield, N. H.
Boston University School of Medicine, 1895.
WILCOX, FRANKLIN S.....West Newton, Mass.
Hahnemann Med. College, Philadelphia, 1894.
WILLIAMS, DUDLEY ABEEL.....Dighton, Mass.
Boston University School of Medicine, 1900.
WILLIAMS, RUBY MAY.....26 Chapel St., Hartford, Conn.
Boston University School of Medicine, 1903.
WILLIS, JOHN EMBERT.....High St., Somersworth, N. H.
Boston University School of Medicine, 1898.
WINDSOR, SARAH SWEET.....138 Marlboro St., Boston, Mass.
Boston University School of Medicine, 1885.
WOOD, ARTHUR U.....483 Elmwood Ave., Providence, R. I.
New York Homœopathic Medical College, 1889.
WOODS, FRANK A.....255 High St., Holyoke, Mass.
Hahnemann Medical College of Philadelphia, 1893.

REGISTER OF MEMBERS IN ATTENDANCE

HENRY C. ALDRICH, M.D., REGISTRAR.

Reported by J. Richey Horner, M. D., Acting Registrar.

Adams, George S., Westboro, Mass.
ADAMS, REUBEN A., Rochester, N. Y.
Adsit, Joseph S., Hoopeston, Ill.
Allard, Frank E., Boston, Mass.
Allen, Edward E., Charlestown, Mass.
Allen, Lanson, Worcester, Mass.
ALLEN, RICHARD C., Philadelphia, Pa.
ALLEN, SARAH J., Charlotte, Mich.
Alliance, Charles E., Utica, N. Y.
Anderson, Jeremiah N., Toronto, Can.
Arnold, Oliver Henry, Providence, R. I.
Ashley, Maurice C., Middletown, N. Y.
Augustine, George W., Detroit, Mich.
Austin, A. Eugene, New York, N. Y.
Bagby, George F., Richmond, Va.
Bailey, Alfred W., Atlantic City, N. J.
Baker, Harry M., Muncie, Ind.
Baker, Harley N., Spring Lake, Mich.
Baldwin, Edward Hill, Newark, N. J.
Ball, Joseph Harris, Bay City, Mich.
Barnes, William E., Boston, Mass.
Barnhill, Tobias G., Findlay, O.
Barrus, Clara, Middletown, N. Y.
Bartlett, Clarence, Philadelphia, Pa.
Barton, J. Marcus, Worcester, Mass.
Bassett, Alice H., Boston, Mass.
Batchelder, Fred. P., Boston, Mass.
Bates, Frank D. W., Hamilton, Ont.
BAXTER, HARRIS H., Cleveland, O.
BEEBE, EUGENE W., Milwaukee, Wis.
BEEBE, HENRY E., Sidney, O.
BELL, JAMES B., Boston, Mass.
BIGGAR, HAMILTON F., Cleveland, O.
Bingham, Russell, Fitchburg, Mass.
Bishop, Channing, Bristol, N. H.
Bissell, Elmer J., Rochester, N. Y.
Bixley, Ernest P., Barre, Mass.
Blackman, Wm. W., Brooklyn, N. Y.
Blair, William W., Pittsburg, Pa.
Boardman, Ed. W., Parsons, Kan.
Boericke, Felix A., Philadelphia, Pa.
Boileau, John D., Philadelphia, Pa.
Bothfield, James F., Newton, Mass.
BOYER, FRANCIS W., Pittsville, Pa.
Brackett, Elizabeth A., Boston, Mass.
Bray, Amanda C., Worcester, Mass.
Briggs, Joseph E., Boston, Mass.
Briggs, Warren S., St. Paul, Minn.
Brown, Lucy H. A., Providence, R. I.
Brown, M. Belle, New York, N. Y.
Brown, Plumb, Springfield, Mass.
Browne, P. K., Milton, Mass.
Buckholz, Louise Z., New York, N. Y.
Buchanan, Thos. D., New York, N. Y.
Buhrman, Ettie Ray, Westboro, Mass.
Bunn, Frank C., East Orange, N. J.
Burpee, Carroll C., Malden, Mass.
Burroughs, Amelia, Boston, Mass.
Bush, Charles W., Boston, Mass.
Calderwood, Samuel H., Boston, Mass.
Colle, Anna B. T., East Somerville, Mass.
Carleton, Burk G., New York, N. Y.
Carmichael, J. H., Springfield, Mass.
Carmichael, Thomas H., Philadelphia.
Carpenter, Willard B., Columbus, O.
Carr, Ada, Paterson, N. J.
Carr, George B., Lynn, Mass.
Carvill, Alphonso H., Boston, Mass.
Castle, Catharine W., Boston, Mass.
Chadwell, O. R., Lynn, Mass.
Chandler, D., Cornwall-on-the-Hudson, N. Y.
Chapman, Harriet B., Cleveland, O.
CHAPMAN, MILLIE J., Pittsburg, Pa.
Charles, Emily C., New York, N. Y.
CHASE, HERBERT A., Cambridge, Mass.
Chase, Joseph E. Weymouth, Mass.
CHASE, J. OSCOE, New York.
CHASE, HIRAM L., Cambridge, Mass.
Church, Adaline, B., Winchester, Mass.
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Clapp, J. Wilkinson, Boston, Mass.
Clarke, Mortimer H., Auburndale, Mass.
BELLOWS, HOWARD P., Boston, Mass.
Bennett, John H., Pawtucket, R. I.
Bennett, William H., Fitchburg, Mass.
Besemer, Howard B., Ithica, N. Y.
Besemer, Howard B., Ithaca, N. Y.
Clarke, Byron G., New York, N. Y.
Clarke, Henry L., Andover, Mass.
Cobb, Joseph P., Chicago, Ill.
Coffin, George H., Hopedale, Mass.
Coffin, John L., Boston, Mass.

Colburn, Frederick, Boston, Mass.
Colby, Edwin A., Gardner, Mass.
Colby, Edward P., Boston, Mass.
Cole, Edward Z., Baltimore, Md.
Cole, Harlan P., Hartford, Conn.
Coleman, E. B., Nantucket, Mass.
Colgrove, C. H., Willimantic, Conn.
Collins, Newton M., Rochester, N. Y.
COMPTON, JOSHUA A., Indianapolis.
CONANT, THOMAS, Gloucester, Mass.
Copeland, Royal S., Ann Arbor, Mich.
Cook, William C., Pittsburg, Pa.
Coon, George S., Louisville, Ky.
Coon, Marion, Boston, Mass.
Costain, Thomas, Chicago, Ill.
Cowell, Joseph H., Saginaw, Mich.
CRANCH, EDWARD, Erie, Pa.
Crane, Clarence, Boston, Mass.
Crisand, Carl, Worcester, Mass.
Crocker, Harry Cl., Providence, R. I.
CROSS, H. B., Jamaica Plain, Boston, Mass.
Crum, Harry Herbert, Ithaca, N. Y.
Crump, Walter G., New York, N. Y.
Currier, Mary B., Somerville, Mass.
CUSHING, A. M., Springfield, Mass.
Cushman, Mary F., Castine, Maine.
Custis, J. B. Gregg, Washington, D. C.
Cyphers, Edward O., Belleville, N. J.
Danforth, Loomis L., New York, N. Y.
Davies, Thomas F., New York, N. Y.
Dean, H. P., Readville, Mass.
Dean, Louis W., Utica, N. Y.
Dearborn, Henry M., New York, N. Y.
DELAMATER, N. B., Chicago, Ill.
Devereaux, Jane, Marblehead, Mass.
Dewey, Willis A., Ann Arbor, Mich.
Dieffenbach, W. H., New York, N. Y.
Dillingham, Thos. H., New York, N. Y.
Dillow, George M., New York, N. Y.
Dodge, Charles E., Manchester, N. Y.
DOUGHTY, FRANCIS E., New York.
Dowling, J. Ivimey, Albany, N. Y.
DRAKE, OLIN M., Boston, Mass.
Drury, Alfred, Paterson, N. J.
Dunham, George P., Lawrence, Mass.
Earl, George H., Boston, Mass.
Eaton, S. L., Newton Highlands, Mass.
Edgar, W. L., Athol, Mass.
Edwards, F. W., Southbridge, Mass.
Emerson, F. L., Dorchester, Mass.
Emerson, Nathaniel W., Boston, Mass.
Emory, Winifred N., Waltham, Mass.
Evans, Chas. H., Chicago, Ill.
Fawcett, John M., Wheeling, W. Va.
Fellows, C. Gurnee, Chicago, Ill.
Fessenden, C. H., Newton Center, Mass.
Fisher, Anna, Minneapolis, Minn.
FISHER, ALBERT L., Elkhart, Ind.
Fisher, Arthur, Montreal, Canada.
Fisher, Arthur, Montreal, Canada.
Fiske, Edwin R., Brooklyn, N. Y.
Fitzpatrick, Gilbert, Chicago, Ill.
Fleming, John R., Atlantic City, N. J.
Flint, A. J. Baker, Boston, Mass.
Foote, D. A., Omaha, Neb.
FORBES, GEO. F., Worcester, Mass.
Forbes, William O., Chicago, Ill.
Foss, David, Newburyport, Mass.
Foster, Herbert W., Montclair, N. J.
Franz, Ernest, Berne, Ind.
French, Malachi R., Chicago, Ill.
French, Winslow B., Boston, Mass.
Frost, Mary S. Hornby-, Boston, Mass.
Fryer, Winson F., Middleboro, Mass.
Fuller, Solomon C., Westboro, Mass.
Gale, Charles, Rutland, Vermont.
Gardner, Frank A., Salem, Mass.
Garrison, Howard C., Camden, N. J.
Garrison, John B., New York, N. Y.
Gary, Clara E., Boston, Mass.
Gatchell, Charles, Chicago, Ill.
Gennerich, Charles, New York, N. Y.
Gilbert, Charles B., Washington, D. C.
Givens, Amos J., Stamford, Conn.
Glazier, Frederick P., Hudson, Mass.
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Gooding, E. Jeannette, Boston, Mass.
Gorham, George E., Albany, N. Y.
Graham, Alfred, Detroit, Mich.
Gregg, Edward R., Pittsburg, Pa.
Green, Julia M., Washington, D. C.
Green, William E., Little Rock, Ark.
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Grove, Charles E., Spokane, Wash.
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Haines, Charles T., Utica, N. Y.
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HALL, ROBERT, Providence, R. I.
Hallman, Victor H., Hot Springs, Ark.
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Hanchett, John L., Sioux City, Iowa.
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Hanson, W. G., Everett, Mass.
Hanson, W. V., Rockland, Maine.
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Harvey, Frank T., Milford, Mass.
Harvey, W. E., Cambridge, Mass.
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Hasbrouck, Sayer, Providence, R. I.
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HEDGES, S. P., Chicago, Ill.
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Heritage, A. C., Jenkintown, Pa.
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Hill, Lucy C., Fall River, Mass.
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Hodgdon, F. A., Malden, Mass.
Hodge, W. H., Niagara Falls, N. Y.
Holmes, M. I., Oakland, Maine.
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Hopkins, Wm. T., Lynn, Mass.
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Horner, J. Richey, Cleveland, O.
Hoskins, Bertha L., Dedham, Mass.
Houghton, N. H., Boston, Mass.
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Howard, A. G., Boston, Mass.
Howard, C. T., Boston, Mass.
Howard, E. M., Camden, N. J.
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Hubbard, Charles H., Chester, Pa.
Hubbell, A. M., Haverhill, Mass.
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Jenney, A. B., Stoneham, Mass.
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Johnson, E. R., Wollaston, Mass.
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King, Wm. R., Washington, D. C.
Kingsman, Richard C., Washington, D. C.
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Kirkland, Edward, Bellows Falls, Vt.
Klein, A. Kathrine, Jersey City, N. J.
Klein, August A., Boston, Mass.
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Krauss, Jas., Boston, Mass.
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Lane, R., Vallejo, Cal.
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Lee, W. T., Somerville, Mass.
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Lewis, Joseph, Milwaukee, Wis.
Linnell, E. H., Norwich, Conn.
Loring, B. T., Boston, Mass.
Louther, Robt. F., Brookline, Mass.
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MacLachlan, Detroit, Mich.
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Maddux, Daniel P., Chester, Pa.
Mann, E. L., St. Paul, Minn.
Mann, Wm. O., Boston, Mass.
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McDowell, George W., New York, N. Y.
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Neale, Lillian B., Boston, Mass.
Newton, C. E., Brewer, Maine.
Newton, Frank L., Somerville, Mass.
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Nobles, W. C., Littleton, N. H.
Norcross, Winfield S., Lewiston, Maine.
Norris, M. W., Grand Rapids, Mich.
Norton, Arthur B., New York, N. Y.
Nott, F. J., New York, N. Y.
O'Brien, Emilie Y., Washington, D. C.
OCKFORD, G. M., Ridgewood, N. J.
Ogden, Benj. H., St. Paul, Minn.
Pagan, F. C., Westerly, R. I.
PAINE, HORACE M., Atlanta, Ga.
PAINE, N. E., West Newton, Mass.

Palmer, A. Worrell, New York, N. Y.
Palmer, Emma C., Baston, Mass.
Palmer, John T., Portland, Maine.
Parsons, Clara J., Springfield, Mass.
Paul, C. Almon, Solon, Maine.
Paul, Willard A., Dorchester, Mass.
PAYNE, JAMES H., Boston, Mass.
Payne, John H., Boston, Mass.
Pearson, Mary M., Boston, Mass.
Peck, E. H., Providence, R. I.
Peck, Grant S., Denver, Colo.
Percy, F. B., Brookline, Mass.
Perkins, Archie C., Fitchburg, Mass.
Perkins, C. Winfield, Chester, Pa.
Perkins, Nathaniel R., Dorchester, Mass.
PHILLIPS, A. W., Derby, Conn.
Pierce, W. I., New York, N. Y.
Pilling, S. O., Newburyport, Mass.
PRATT, EDWIN H., Chicago, Ill.
Pratt, John W., Coatesville, Pa.
Pratt, Trimble, Media, Pa.
Price, Eldridge C., Baltimore, Md.
Prilay, John M., Bangor, Maine.
Porter, E. H., New York, N. Y.
Powers, A. H., Boston, Mass.
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Rand, J. P., Monson, Mass.
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Ranson, E. T., Boston, Mass.
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Renwick, W. J., Auburn, Maine.
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Rice, George B., Boston, Mass.
Rice, H. E., Boston, Mass.
Richards, Robt. M., Detroit, Mich.
RICHARDSON, B. M., Brooklyn, N. Y.
Richardson, Frank C., Boston, Mass.
Rieger, J., Dunkirk, N. Y.
Roberts, O. W., Springfield, Mass.
Roberts, D. J., New Rochelle, N. Y.
Roberts, George W., New York, N. Y.
Rockwell, J. A., Jr., Cambridge, Mass.
Rockwell, John A., Harriman, Tenn.
Root, Stella Q., Stamford, Conn.
Rossiter, Pottstown, Pa.
Royal, George, Des Moines, Iowa.
Rumsey, Charles L., Baltimore, Md.
RUNNELS, ORANGE S., Indianapolis, Ind.
Rushmore, Edward, Plainfield, N. J.
Sackett, H. R., Holyoke, Mass.
Sager, C. W., Titusville, Pa.
Sanger, H. M., Providence, R. I.
Sanders, Orrin B., Boston, Mass.
Sawyer, Charles E., Marion, Ohio.
Schantz, M. M. Hassler, Reading, Pa.
Schenck, Herbert D., Brooklyn, N. Y.
Schneider, A. B., Cleveland, O.
Schultze, C. A., Columbus, Ohio.
Scott, C. W., Andover, Mass.
Sears, A. H., Anderson, Ind.
Sears, E. A., Waltham, Mass.
Seibert, W. A., Easton, Pa.
Shears, G. F., Chicago, Ill.
Shearer, Thomas L., Baltimore, Md.
Shepherd, George A., New York, N. Y.
Shepherd, H. L., Boston, Mass.
SHERMAN, J. H., Boston, Mass.
Sherman, James T., Boston, Mass.
SHERMAN, LEWIS, Milwaukee, Wis.
Sherman, Nancy B., Washington, D. C.
Shipman, T. H., Providence, R. I.
Shower, George T., Baltimore, Md.
Simon, S. H., Brooklyn, N. Y.
Simonson, J. T., New York, N. Y.
Smith, George R., Dover, N. H.
SMITH, ST. CLAIR, New York, N. Y.
SMITH, THOMAS FRANKLIN, New York.
Smith, Wilson A., Morgan Park, Ill.
Smith, Winfield S., Boston, Mass.
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Spalding, Samuel H., Hingham, Mass.
Spaulding, H. O., Boston, Mass.
Spencer, A. W., Batavia, Ill.
Spencer, G .F. A., Ware, Mass.
Southgate, Robert W., Boston, Mass.
Southwick, G. R., Boston, Mass.
Stauffer, A. P., Hagerstown, Md.
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Stearns, Guy B., New York, N. Y.
Stevens, Edwin D., Francestown, N. H.
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Stiles, E. L., New Britain, Conn.
Stitzel, J. W., Hollidaysburg, Pa.
Storer, John, Chicago, Ill.
Stowell, F. A., Lawrence, Mass.
Streeter, H. A., Clinton, Mass.
STREETS, J. G., Bridgeton, N. J.
Strickler, D. A., Denver, Colo.
Strong, T. Morris, Boston, Mass.
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Sumner, C. R., Rochester, N. Y.
Sutherland, John P., Boston, Mass.
Swain, Mary L., Boston, Mass.
Swartwout, F. A., Washington, D. C.
Sweet, C. M., Springfield, Mass.
Swett, Emily F., Medina, N. Y.
Sword, George P., Huntington, N. Y.
Swormstedt, L. B., Washington, D. C.
Sylvester, S. A., Newton Centre, Mass.
Teets, Charles E., New York, N. Y.
Tenney, L. M., San Jose, Cal.
TERRY, MARSHALL O., Utica, N. Y.
Thomas, Charles H., Cambridge, Mass.
Thompson, C. E. P., Boston, Mass.
Tobey, W. H., Boston, Mass.

Tompkins, A. H., Boston, Mass.
Townsend, Irving, New York, N. Y.
Trull, J. F., Biddeford, Maine.
Tupper, J. D., Westport, Mass.
Turner, M. W., Brookline, Mass.
Van Artsdalen, C., Philadelphia, Pa.
Van Baun, W. W., Philadelphia, Pa.
Van der Burg, W. H., New York, N. Y.
Van Deursen, George L., Lowell, Mass.
Van Loon, A. B., Albany, N. Y.
Walker, Hannah E., Sharon, Pa.
Wallace, C. R., Struthers, O.
Walter, Robert, Walter's Park, Pa.
WALTON, C. E., Cincinnati, O.
Ward, Florence N., San Francisco, Cal.
Waring, Guernsey P., Chicago, Ill.
WARREN, J. K., Worcester, Mass.
Wasgatt, R. J., Rockland, Maine.
Watters, Wm. H., Boston, Mass.
Weaver, Chandler, Philadelphia, Pa.
Weaver, Harry S., Philadelphia, Pa.
Wells, David W., Boston, Mass.
Wentworth, C. Y., Newton Highlands, Mass.
Wesselhoeft, W. F., Boston, Mass.
Wetherbee, L. E., Worcester, Mass.
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Wiggins, T. C., Brooklyn, N. Y.
Wilcox, De Witt G., Buffalo, N. Y.
Wiley, R. W., Laconia, N. H.
Wilkins, G. H., Newtonville, Mass.
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Williams, Carl A., New London, Conn.
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Wilson, John E., New York, N. Y.
Windsor, Sarah Sweet, Boston, Mass.
Wiswall, E. H., Wellesley, Mass.
Wood, F. W., Chicago, Ill.
Worcester, G. W., Newburyport, Mass.
Wood, James C., Cleveland, O.
Wood, N. M., Charlestown, Mass.
Worcester, F. B., Keene, N. H.
Worcester, John F., Dorchester, Mass.
WORCESTER, S. H., Portland, Maine.
Young A. D., Jamestown, N. Y.

NOTE.—Names of Seniors are in Capitals.

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All members of the Institute who have maintained twenty-five consecutive years of membership shall be considered *Senior Members*, and be exempt from the payment of annual dues; and the names of such members shall be printed first in the list of members in capital letters.—*Article V., Section 6, of the By-Laws.*

There shall be published in each annual volume of the TRANSACTIONS: 1. A list of senior members arranged according to their years of membership. 2. An alphabetical list of members, including the names of senior members in CAPITALS. 3. A list of members classified by States. The list of deceased members shall be revised and republished annually. The complete list of members of the Institute from its organization and its Code of Ethics shall be published every five years.—*Article VIII., Section 4, of the By-Laws.*

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1846.

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1847.

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1848.

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1853.

ANGELL, HENRY C., 16 Beacon Street, Boston, Mass.
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SKILES, FRANCIS W., Suffolk, Va.

1854.

SISSON, EDWARD R., New Bedford, Mass.
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1855.

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1857.

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1858.

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KELLOGG, EDWIN M., 155 Madison Avenue, New York, N. Y.
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1859.

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1860.

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1865.

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1866.

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1868.

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BUDLONG, JOHN C., Providence, R. I.
FINCH, EDWIN W., Center Avenue and Prospect Street, New Rochelle, N. Y.
HEDGES, SAMUEL P., 890 Evanston Avenue, Chicago, Ill.
MACFARLAN, MALCOLM, 1805 Chestnut Street, Philadelphia, Pa.

1869.

ARCULARIUS, PHILIP E., 104 West 44th Street, New York, N. Y.
BISHOP, HERBERT M., 2627 Hoover Street, Los Angeles, Cal.
BLOSS, JABEZ P., 109 2d Street, Troy, N. Y.
BOWEN, GEORGE W., 232 East Washington Street, Fort Wayne, Ind.
BOWMAN, BENJAMIN, Chambersburg, Pa.
BRADFORD, THOMAS L., 1862 Franklin Avenue, Philadelphia, Pa.
BUCK, JIRAH D., 124 West 7th Street, Cincinnati, Ohio.
COBURN, EDWARD S., 91 4th Street, Troy, N. Y.
COMPTON, J. AUGUSTINE, Indianapolis, Ind.
CROSS, HIRAM B., 21 Seavern's Avenue, Jamaica Plain, Boston, Mass.
DENNIS, LABAN, 30 Central Avenue, Newark, N. J.
DUDLEY, PEMBERTON, 1405 North 16th Street, Philadelphia, Pa.
FLANDERS, DAVID P., Belfast, Me.
GIFFORD, GILBERT L., Hamilton, N. Y.
GRAVES, STOCKBRIDGE P., Saco, Me.
HAYWARD, JOSEPH W., Taunton, Mass.
HOLT, EDWARD B., Lowell, Mass.
HUMPHREY, OTIS M., 392 Wistford Street, Lowell, Mass.
KINNE, THEODORE Y., Paterson, N. J.
MCGEORGE, WALLACE, 521 Broadway, Camden, N. J.
MIDDLETON, MELBOURNE F., 432 Market Street, Camden, N. J.
MORSE, MARTIN V. B., Manchester, N. H.
MOSSMAN, NATHAN A., 28 East 47th Street, New York, N. Y.
PAYNE, JAMES H., 344 Commercial Avenue, Boston, Mass.
SAGE, WM. H., New Haven, Conn.
SEIP, CHRISTIAN P., 636 Penn Avenue, Pittsburg, Pa.
SMITH, ST. CLAIR, 25 West 50th Street, New York, N. Y.
SPALDING, HENRY E., 519 Beacon Street, Boston, Mass.
STREETER, JOHN W., 2001 Prairie Avenue, Chicago, Ill.
WOODWARD, ALVIN M., 128 West 13th Street, New York, N. Y.

1870.

BEEBE, EUGENE W., 173 Wisconsin Street, Milwaukee, Wis.
BETTS, B. FRANK, 1609 Girard Avenue, Philadelphia, Pa.
BOYER, FRANCIS W., Pottsville, Pa.
CHENEY, BENJ. H., 45 Elm Street, New Haven, Conn.
GORDON, GEORGE A., Chillicothe, Mo.
GROSVENOR, LEMUEL C., 185 Lincoln Avenue, Chicago, Ill.
JOHNSON, ROBERT B., Riverside, Cal.
KING, EDWARD H., 906 15th Street, Denver, Colo.
KIPPAX, JOHN R., 3154 Indiana Avenue, Chicago, Ill.
PENNOYER, NELSON A., Kenosha, Wis.
SHELDON, JAY W., 501 Fayette Park, Syracuse, N. Y.
VAN NORMAN, HORACE B., 289 Pearl Street, Cleveland, Ohio.
WOODBURY, WILLIAM H., 22 Central Music Hall, Chicago, Ill.

1871.

ALLEN, RICHARD C., 4419 Frankford Avenue, Philadelphia, Pa.
BINGAMAN, CHAS. F., 922 Penn Avenue, Pittsburg, Pa.
BOWIE, ALONZO P., 87 Main Street, Uniontown, Pa.
CHASE, MAURICE J., Galesburg, Ill.
CHURCH, CHARLES A., 128 Prospect Street, Passaic, N. J.
DRAKE, OLIN M., 70 Huntingdon Avenue, Boston, Mass.
EDMUNDSON, WALTER F., 375 Fifth Avenue, Pittsburg, Pa.
FAGER, CHARLES B., 120 Walnut Street, Harrisburg, Pa.
GREENLEAF, JOHN T., Owego, N. Y.
HIGBEE, ALBERT E., Masonic Temple, Minneapolis, Minn.
HIGBEE, CHESTER G., cor. 9th and Robert Streets, St. Paul, Minn.
KNERR, CALVIN B., 1137 Spruce Street, Philadelphia, Pa.
LEWIS, HENRY M., "Florence," Fourth Avenue and 18th Street, New York.
MARTIN, CONSTANTINE H., Allentown, Pa.

MERCER, ROBERT P., 223 West 3d Street, Chester, Pa.
MIDDLETON, CALEB S., 1523 Girard Avenue, Philadelphia, Pa.
MITCHELL, JOHN J., Newburgh, N. Y.
SARTAIN, HARRIET J., 212 West Logan Square, Philadelphia, Pa.
SOUTHWICK, AUGUSTUS B., 107 W. Liberty Street, Rome, N. Y.
STREETS, JACOB G., Bridgeton, N. J.

1872.

ALLEN, HENRY C., 5142 Washington Avenue, Chicago, Ill.
BENDER, PROSPER, Exeter Chambers, Boston, Mass.
BERGHAUS, ALEXANDER, 138 E. 65th Street, New York, N. Y.
DAKE, WILLIAM C., 218 N. Vine Street, Nashville, Tenn.
DOUGHTY, FRANCIS E., 512 Madison Avenue, New York, N. Y.
FULTON, HENRY W., cor. Ripley and Highland Avenues, Pittsburg, Pa.
HUTCHINS, HORACE S., Batavia, N. Y.
MORSE, LUCIUS D., P. O. Box 584, Atlanta, Ga.
OCKFORD, GEORGE M., 3 Oak Street, Ridgewood, N. J.
PETTINGILL, ELIZA F., 300 N. 10th Street, Philadelphia, Pa.
RICHARDSON, BRADBURY M., 151 Milton Street, Brooklyn, N. Y.
WALTER, ZIBA D., 107 W. 7th Street, Pueblo, Colo.
WARREN, JOHN K., 68 Pleasant Street, Worcester, Mass.
WILLIAMSON, MATTHEW S., 1522 Arch Street, Philadelphia, Pa.
WORCESTER, SAMUEL, 31 Winter Street, Portland, Me.

1873.

ALLEN, GEORGE D., Portland, Mich.
BREYFOGLE, WM. A., 100 Washington Street, Chicago, Ill.
BUFFUM, JOSEPH H., 34 Washington Street, Chicago, Ill.
BUTLER, WILLIAM M., 507 Clinton Avenue, Brooklyn, N. Y.
CANFIELD, CORRESTA T., 106 South Walnut Street, Pittsburg, Kan.
FISHER, A. LEROY, 315 Pigeon Street, Elkhart, Ind.
FISHER, CHARLES E., 31 Washington Street, Chicago, Ill.
HITCHCOCK, DEXTER, Norwalk, Conn.
JENNY, WILLIAM H., Broadway and Twelfth Street, Kansas City, Mo.
JONES, GAIUS J., Case Library Building, Cleveland, O.
LUKENS, MERRIKEN B., 161½ Edgewood Avenue, Atlanta, Ga.
PATCHEN, GEORGE H., 11 E. Fifty-ninth Street, New York, N. Y.*
RUNNELS, ORANGE S., 600 N. Meridian Street, Indianapolis, Ind.
SMITH, CHESTER, Portland, Mich.
VAN NORMAN, EDGAR V., 545 S. Broadway, Los Angeles, Cal.
WARREN, H. ANNA, 817 Bond Street, Dennison, Tex.
WATERS, MOSES H., 126 N. Seventh Street, Terre Haute, Ind.
WILSON, MATHEW T., 1170 Market Street, San Francisco, Cal.

1874.

BAETHIG, HENRY, 350 Pennsylvania Street, Buffalo, N. Y.
BIEGLER, JOSEPH A., 58 S. Clinton Street, Rochester, N. Y.
BOND, MARY E., 122 Lexington Avenue, New York, N. Y.
BOYNTON, FRANK H., 36 W. Fiftieth Street, New York, N. Y.
CAMPBELL, MERRIT B., Patton, Cal.
CRANK, CHAS. D., 106 Auburn Avenue, Cincinnati, O.
EVANS, ALBERT J., Fredonia, N. Y.
FORBES, GEORGE F., 42 William Street, Worcester, Mass.
GREGORY, EDWARD P., Lafayette, near State Street, Bridgeport, Conn.
HALL, ROBERT, 117 Broad Street, Providence, R. I.
HERRON, CHARLES D., 3505 Butler Street, Pittsburg, Pa.
HUNT, DWIGHT B., 159 Madison Avenue, New York, N. Y.
KEEP, CAROLINE J. YEOMANS, 308 W. Thirty-sixth Street, New York, N. Y.
MCDONALD, WILLIAM O., 117 W. Forty-fourth Street, New York, N. Y.
MCGAVECK, CLARA PLYMPTON, P. O. Box 346, Nashville, Tenn.
PRATT, EDWIN H., 100 State Street, Chicago, Ill.
WAIT, PHOEBE J. B., Ninth Avenue cor. Thirty-fourth Street, New York, N. Y.
WALTON, CHARLES E., N. W. cor. Seventh and John Streets, Cincinnati, O.

1875.

BUTLER, CLARENCE W., 35 Fullerton Avenue, S. Montclair, N. J.
CHAPMAN, MILLIE J., 321 Smith Block, Lyeth Street, Pittsburg, Pa.
COWPERTHWAITE, ALLEN C., 31 Washington Street, Chicago, Ill.
DAVIS, FIELDING L., 209 Locust Street, Evansville, Ind.
EVERETT, AMBROSE S., 37 Garrison Avenue, Jersey City, N. J.
GROSS, JAMES ELDRIDGE, 531 La Salle Avenue, Chicago, Ill.
GUERNSEY, JOSEPH C., 1923 Chestnut Street, Philadelphia, Pa.
HASBROUCK, EVERETT, 369 Ninth Street, Brooklyn, N. Y.
HOUSE, ROBERT B., 108 E. High Street, Springfield, O.
JONES, LEONIDAS M., Brooklyn, Mich.
KORNDOERFER, AUGUSTUS, 142 N. Eighteenth Street, Philadelphia, Pa.
MILLER, CHRISTOPHER C., 31 Winder Street, Detroit, Mich.
MITCHELL, JOHN NICHOLAS, 1505 Spruce Street, Philadelphia, Pa.
RUNNELS, MOSES T., 912 Walnut Street, Kansas City, Mo.
SCHLEY, JAMES MONTFORT, 32 W. Forty-ninth Street, New York, N. Y.
SHERMAN, LEWIS, 171 Wisconsin Street, Milwaukee, Wis.
SPINNEY, ANDREW B., Reed City, Mich.
TAYLOR, ESTHER W., 15 E. Cottage Street, Boston, Mass.
TERRY, MARSHALL O., 196 Genesee Street, Utica, N. Y.
THOMAS, CHARLES M., 1623 Arch Street, Philadelphia, Pa.

1876.

ADAMS, REUBEN A., 46 North Fitzhugh Street, Rochester, N. Y.
BEEBE, HENRY E., Sidney, Ohio.
CAMPBELL, JAMES A., 1729 Washington Avenue, St. Louis, Mo.
CHASE, HERBERT A., 950 Massachusetts Avenue, Cambridgeport, Mass.
CONANT, THOMAS, Gloucester, Mass.
HINDMAN, DAVID R., Marion, Ia.
JACKSON, EDWARD R., Dubuque, Ia.
JOHNSON, GEORGE H. T., Atchison, Kan.
JOHNSON, MARIA N., 1221 Madison Avenue, Baltimore, Md.
KANOUSE, ABIJAH W., Appleton, Wis.
MERCER, WILLIAM H., 1815 Church Street, Galveston, Tex.
MOHR, CHARLES, 1823 Green Street, Philadelphia, Pa.
MONMONIER, JULIUS L., 480 Classon Avenue, Brooklyn, N. Y.
NICHOLS, AMMI S., 608 DeKum Block, Portland, Ore.
PRICE, EMMOR H., 400 Georgia Avenue, Chattanooga, Tenn.
RICHARDSON, WILLIAM C., 411 Olive Street, St. Louis, Mo.
SLOUGH, FRANK J., Allentown, Pa.
VAN VLECK, PETER H., Sturgis, Mich.
WILLIAMSON, ALONZO P., 502 Nicollet Avenue, Minneapolis, Minn.
WILSON, JOSEPH H., Bellefontaine, O.

1877.

BELLOWS, HOWARD P., cor. Boylston and Berkeley Streets, Boston, Mass.
COUCH, ASA S., Fredonia, N. Y.
DAKE, WALTER M., 218 N. Vine Street, Nashville, Tenn.
LEWIS, F. PARK, 454 Franklin Street, Buffalo, N. Y.
PAINE, N. EMMONS, West Newton, Mass.
PENFIELD, SOPHIA, Danbury, Conn.
VILAS, CHAS. H., 2811 Cottage Grove Avenue, Chicago, Ill.

1878.

CRANCH, EDWARD, Erie, Pa.
DAVIS, JOHN E. L., 743 Madison Avenue, New York, N. Y.
JACKSON, WILLIAM L., 76 Dudley Street, Roxbury, Boston, Mass.
KERSHAW, J. MARTINE, 3421 Washington Avenue, St. Louis, Mo.
MARTIN, WILLIAM J., 1712 Carson Street, S., South Pittsburg, Pa.

ALPHABETICAL LIST OF MEMBERS

The figures placed before the names indicate the date of membership. Names in SMALL CAPITALS are "Senior Members."

Members are requested to inform the General Secretary of any change in their addresses. Those residing in a city are requested to furnish him with their *street* addresses.

Members neglecting to pay their dues for three years, after proper notification from the Treasurer, shall have their names dropped from the roll of membership.—*Article V., Section 4, of the By-Laws.*

All names marked (*) indicate: *Deceased since last session.*

1901. Abbott, Edward C., Main Street, Black River Falls, Wis.
1903. Abbott, Albert Francis, Manchester, N. H.
1901. Abell, Edmund J., 101 South Centre Street, Joliet, Ill.
1896. Ackerman, James F., 905 Grand Avenue, Asbury Park, N. J.
1902. Adams, Ernest O., 176 Euclid Avenue, Cleveland, O.
1899. Adams, Charles F., 229 Union Street, Hackensack, N. J.
1895. Adams, George Francis, Kenosha, Wis.
1887. Adams, George Smith, Westboro, Mass.
1895. Adams, H. Alden, 21 W. Ohio Street, Indianapolis, Ind.
1876. ADAMS, REUBEN A., 46 North Fitzburgh Street, Rochester, N. Y.
1899. Adams, Theo. Lewis, 1831 Chestnut Street, Philadelphia, Pa.
1903. Adsit, Joseph S., Hoopeston, Ill.
1892. Aiken, John Gayle, 1102 St. Charles Avenue, New Orleans, La.
1888. Aldrich, Henry C., 313 Medical Block, Minneapolis, Minn.
1902. Aldrich, Stewart W., Grand Avenue, Des Moines, Ia.
1894. Alexander, Ernest L., 1204 North 24th Street, Omaha, Neb.
1895. Allard, Frank E., 373 Commonwealth Avenue, Boston, Mass.
1881. Allen, Albion H., New London, Conn.
1900. Allen, Edward Everett, 385 Main Street, Charlestown, Mass.
1873. ALLEN, GEORGE D., Portland, Mich.
1872. ALLEN, HENRY C., 5142 Washington Avenue, Chicago, Ill.
1903. Allen, Millson Raleigh, cor. Monticello Avenue and Charlotte, Norfolk, Va.
1899. Allen, Herbert C., 310 Clermont Avenue, Brooklyn, N. Y.
1899. Allen, J. Wilford, 110 West 12th Street, New York, N. Y.
1887. Allen, Lamson, 20 Elm Street, Worcester, Mass.
1891. Allen, Paul, 3 East 48th Street, New York, N. Y.
1871. ALLEN, RICHARD C., 419 Frankford Avenue, Philadelphia, Pa.
1892. Allen, Sarah J., 324 Lawrence Avenue, W., Charlotte, Mich.
1901. Alliaume, Charles E., 221 Genesee Street, Utica, N. Y.
1895. Allison, George Freeman, Warren Avenue, East Providence, R. I.
1901. Ambler, John Edgar, 134 East 19th Street, New York, N. Y.
1894. Ames, Charles S., Ada, Ohio.
1903. Amsden, Henry Hubbard, 33 Bank Street, Attleboro, Mass.
1896. Anderson, Jeremiah N., 5 College Street, Toronto, Can.
1893. Anderson, John Wylie, 16 and 17 Steele Block, Denver, Colo.
1892. Andrews, William R., 314 West Pike Street, Clarksburg, W. Va.
1901. Angell, Augustus, 904 Main Street, Hartford, Conn.
1853. ANGELL, HENRY C., 16 Beacon Street, Boston, Mass.
1901. Angell, Milton H., Salt Point, N. Y.
1899. Aplynne, Guy E., 1214 Main Street, Kansas City, Mo.
1891. Applegate, Grover T., 25 Livingstone Avenue, New Brunswick, N. J.
1899. Appleton, Lucy, 711 Boylston Street, Boston, Mass.
1869. ARCULARIUS, PHILIP E., 52 Chestnut Street, East Orange, N. J.
1902. Armsbury, Aaron B., Marine City, Mich.
1900. Arndt, George O., 123 East High Street, Mt. Vernon, Ohio.
1882. Arndt, Hugo R., 372 Sutter Street, San Francisco, Cal.
1902. Arnold, Oliver Henry, 275 Washington Street, Providence, R. I.

1891. Arschagouni, John, 727 Lexington Avenue, New York, N. Y.
1899. Arthur, Alexander Beck, 2039 Spring Garden Street, Philadelphia, Pa.
1897. Arthur, Daniel H., Gowanda, N. Y.
1891. Artz, Jerome L., 3000 Westfield Avenue, Camden, N. J.
1899. Ashcraft, Leon Thomas, 1833 Chestnut Street, Philadelphia, Pa.
1900. Ashley, Maurice C., N. Y. State Hospital, Middletown, N. Y.
1901. Aten, William Henry, 100 Greene Avenue, Brooklyn, N. Y.
1902. Augustin, George William, 469 Third Avenue, Detroit, Mich.
1899. Aurand, Samuel Herbert, 720 Washington Boulevard, Chicago, Ill.
1901. Austin, A. Eugene, 17 East 66th Street, New York, N. Y.
1901. Averill, Maria Brown, 3145 G Street, San Diego, Cal.
1897. Ayler, Amos E., 125 Washington Street, Green Castle, Ind.

1891. Babbitt, Zeno B., 12 Iowa Circle, N. W., Washington, D. C.
1897. Babcock, Archibald H., Randolph, N. Y.
1885. Babcock, Daniel A., Fall River, Mass.
1892. Babcock, Francis Lester, 15 Walnut Street, Dedham, Mass.
1896. Babington, John, 84 Sixth Street, Detroit, Mich.
1901. Bachman, Geo. A., 167 South Avenue, Rochester, N. Y.
1874. Baethig, Henry, 350 Pennsylvania Street, Buffalo, N. Y.
1900. Bagby, George Franklin, 206 East Grace Street, Richmond, Va.
1900. Bagg, Clinton L., 26 West 46th Street, New York, N. Y.
1892. Baier, George Frederick, Norwood, Pa.
1888. Bailey, Benjamin, F., 141 South 12th Street, Lincoln Neb.
1888. Bailey, E. Stillman, 3034 Michigan Avenue, Chicago, Ill.
1901. Bailey. Dewitt P., 507 Chenango Street, Binghamton, N. Y.
1893. Bailey, William M., 25 Miami Avenue, Detroit, Mich.
1887. Bailey, Alfred W., 1809 Pacific Avenue, Atlantic City, N. J.
1902. Baker, Albert L., 1400 12th Avenue, Altoona, Pa.
1901. Baker, Harry Burgwyn, 1 East Grace Street, Richmond, Va.
1902. Baker, Harry H., 710 East Main Street, Muncie, Ind.
1901. Baker, Harley, Nathan, Spring Lake, Mich.
1894. Baker, Jennie Van Holland, 512 Bedford Avenue, Brooklyn, N. Y.
1900. Baker, William F., 2131 East Cumberland Street, Philadelphia, Pa.
1896. Baldinger, Arthur F., 678 The Arcade, Cleveland, O.
1901. Baldwin, Edward Hill, 77 Clinton Avenue, Newark, N. J.
1892. Baldwin, Henry D., Elyria, O.
1857. Baldwin, Jared D., 7 East 41st Street, New York, N. Y.
1899. Ball, Joseph Harris, 301 Crapo Block, Bay City, Mich.
1892. Ballard, Asa N., 2020 Third Avenue, Birmingham, Ala.
1901. Ballard, J. Stow, 610 Hyde Street, San Francisco, Cal.
1899. Balliet, Lorenzo Dow, 1001 Atlantic Avenue, Atlantic City, N. J.
1892. Balyeat, Edmund A., 122 West Main Street, Kalamazoo, Mich.
1868. Bancroft, Walton, Keokuk, Iowa.
1903. Bangs, Edwin Mayo, East Newton, Boston, Mass.
1898. Barbee, Benj. Irving, 60 East Broad Street, Columbus, O.
1888. Barber, Oscar M., Mystic Bridge, Conn.
1903. Bard, George Percival, Stafford Springs, Conn.
1901. Barker, Caleb, Jr., 130 West 93rd Street, New York City.
1881. Barker, Clarence F., Ellis Avenue and Oakwood Boulevard, Chicago, Ill.
1903. Barker, Emile Jones, The Eliot, Washington Street, Wellesley, Mass.
1891. Barnard, Charles A., Centerdale, R. I.
1903. Barnard, Esther Subia, "Inter Pines," Goshen, N. Y.
1891. Barnard, James S., 2724 North Charles Street, Baltimore, Md.
1900. Barndt, Milton A., Grand Avenue and Third Street, Milwaukee, Wis.
1900. Barnes, William Ellsworth, 432 Columbia Road, Boston, Mass.
1894. Barnhill, Tobias G., 208 South Main Street, Findlay, O.
1901. Barnum, Arthur T., 2524 Collinwood Avenue, Toledo, Ohio.
1868. Barrows, George S., Marion, Kan.
1903. Barrus, Clara, State Homœopathic Hospital, Middletown, N. Y.
1892. Barstow, Benjamin Parker, Kingston, Mass.
1896. Bartholomew, Daniel D., Holly, Mich.
1886. Bartlett, Clarence, 1506 Arch Street, Philadelphia, Pa.

1903. Bartlett, G. Waldron, 167 Bay 28th Street, Bensonhurst, N. Y.
1892. Barton, J. Marcus, Worcester, Mass.
1901. Barton, Pauline Heidet, Rose Building, Cleveland, Ohio.
1901. Baruch, Solomon, 1135 Lexington Avenue, New York, N. Y.
1889. Bascom, Henry M., 728 Columbus Street, Ottawa, Ill.
1903. Bassett, Alice Haley, 2 Commonwealth Avenue, Boston, Mass.
1880. Bassett, John S., 11 West 31st Street, New York, N. Y.
1892. Batchelder, Frederick P., 411 Massachusetts Avenue, Boston, Mass.
1901. Bates, Frank D. W., 34 James Street, North Hamilton, Ont., Can.
1868. Baxter, Harris H., 275 Prospect Street, Cleveland, Ohio.
1867. Baylies, Bradford L. B., 418 Putnam Avenue, Brooklyn, N. Y.
1902. Beach, Eliza J., 50 Worcester Avenue, Pasadena, Cal.
1896. Beaman, Charles P., Ithaca, N. Y.
1902. Beattie, Joseph Hoyt, Warwick, N. Y.
1889. Becker, Frederick, Clermont, Iowa.
1888. Becker, Frederick J., Postville, Iowa.
1865. Beckwith, David D., 94 Dorchester Avenue, Cleveland, Ohio.
1901. Beckwith, Harry M., 304 Barber Building, Joliet, Ill.
1857. Beckwith, Seth R., 170 Fifth Avenue, New York, N. Y.
1870. Beebe, Eugene W., 173 Wisconsin Street, Milwaukee, Wis.
1876. Beebe, Henry E., Sidney, Ohio.
1891. Beebe, William B., 197 Fairfield Avenue, Bridgeport, Conn.
1899. Beeler, Margaret Hoper, 1229 North Tejon Street, Colorado Springs, Colo.
1892. Belden, Charles K., 28 Clinton Avenue, Jamaica, N. Y.
1868. Bell, James B., 178 Commonwealth Avenue, Boston, Mass.
1867. Bell, James S., 2200 Congress Street, Chicago, Ill.
1901. Bell, Willard N., 6 Greene Street, Ogdensburg, N. Y.
1877. Bellows, Howard P., 220 Clarendon Street, Boston, Mass.
1899. Belville, Jacob Edgar, 5915 Green Street, Philadelphia, Pa.
1872. Bender, Prosper, Exeter Chambers, Boston, Mass.
1881. Bennett, James A., 4 Irving Place, New York, N. Y.
1897. Bennett, John Hillman, 306 High Street, Pawtucket, R. I.
1899. Bennett, Ruth Parker, Lincoln Street and Pacific Avenue, Santa Cruz, Cal.
1889. Bennett, William Henry, Fitchburg, Mass.
1888. Bennitt, Francis M., 120 Sumner Avenue, Springfield, Mass.
1899. Benthack, Peter L., Platte Center, Neb.
1846. Berens, Joseph, 1500 Green Street, Philadelphia, Pa.
1872. Berghaus, Alex., 138 East 65th Street, New York, N. Y.
1892. Bergman, Nils, 1201½ Cass Street, Joliet, Ill.
1897. Besemer, Howard Burhause, 232 South Albany Street, Ithaca, N. Y.
1893. Besemer, Martin, 116 East State Street, Ithaca, N. Y.
1890. Best, George B., Englewood, N. J.
1870. Betts, B. Frank, 1609 1609 Girard Avenue, Philadelphia, Pa.
1902. Bibighouse, James Russell, 2156 Natrona Street, Philadelphia, Pa.
1874. Biegler, Joseph A., 58 South Clinton Street, Rochester, N. Y.
1887. Bier, Peter A., 4200 Butler Street, Pittsburg, Pa.
1901. Bierbauer, Bruno W., 160 Euclid Avenue, Cleveland, Ohio.
1868. Biggar, Hamilton F., 160 Euclid Avenue, Cleveland, Ohio.
1898. Biggar, Hamilton F., Jr., 160 Euclid Avenue, Cleveland, Ohio.
1903. Biggs, Elmer LeRoy, 26 Central Avenue, Hot Springs, Ark.
1876. Bigler, William H., 118 North 17th Street, Philadelphia, Pa.
1898. Billings, Robert Anderson, Longmont, Colo.
1899. Bittner, Albert J., 1029 Hamilton Street, Allentown, Pa.
1871. Bingaman, Chas. F., 922 Penn Avenue, Pittsburg, Pa.
1900. Bingham, Anson Holden, 113 West 87th Street, New York, N. Y.
1892. Bingham, Russell, 62 Day Street, Fitchburg, Mass.
1895. Birch, Charles E., White Plains, N. Y.
1881. Birdsall, Stephen T., Glens Falls, N. Y.
1895. Birdsall, Thomas P., Paterson, N. J.
1903. Bishop, Channing, Bristol, N. H.
1869. Bishop, Herbert M., 2627 Hoover Street, Los Angeles, Cal.
1899. Bishop, Hudson D., 143 Euclid Avenue, Cleveland, Ohio.
1891. Bishop, William H., 56 West 48th Street, New York, N. Y.

1853. Bissell, Arthur F., 80 Wall Street, New York, N. Y.
1893. Bissell, Elmer Jefferson, 75 South Fitzhugh Street, Rochester, N. Y.
1902. Bissell, Fred C., 13 North Main Street, Oberlin, Ohio.
1903. Bixby, Ernest P., Barre, Mass.
1902. Blackburn, Edwin C., 1421 11th Avenue, Altoona, Pa.
1893. Blackman, George Edwin, Vernon, Tex.
1891. Blackman, Orville B., Dixon, Ill.
1901. Blackman, William W., 519 Clinton Avenue, Brooklyn, N. Y.
1903. Blackmore, Richard, Jr., Main Street, South Ashburnham, Mass.
1893. Blackwood, Alexander L., 9151 Commercial Avenue, Chicago, Ill.
1902. Blair, Thos. L., Waynesburg, Pa.
1901. Blaine, William M., Youngstown, Ohio.
1894. Blair, William Wightman, 406 Penn Avenue, Pittsburg, Pa.
1896. Blanke, Theodore F., 2239 South Grand Avenue, St. Louis, Mo.
1887. Blodgett, Stephen H., South Lincoln, Mass.
1869. Bloss, Jabez P., 108 Second Street, Troy, N. Y.
1894. Blouke, Milton Baker, 1222 West Washington Boulevard, Chicago, Ill.
1894. Blunt, Arthur W., 323 5th Avenue, Clinton, Iowa.
1893. Boardman, Edward W., 115 South Central Avenue, Parsons, Kan.
1895. Boericke, Felix A., 1011 Arch Street, Philadelphia, Pa.
1883. Boericke, William, 1812 Washington Street, San Francisco, Cal.
1901. Bogardus, Charles S., Clinton, Ill.
1892. Boileau, John D., 804 Lehigh Avenue, Philadelphia, Pa.
1897. Bond, Aaron J., 1 Center Street, Adams, Mass.
1874. Bond, Mary E., 122 Lexington Avenue, New York, N. Y.
1903. Bongart, Walter Eugene, 278 Cabot Street, South Beverly, Mass.
1891. Bornmann, Alfred, 271 Putnam Avenue, Brooklyn, N. Y.
1890. Bothfeld, James F., 148 Church Street, Newton, Mass.
1896. Bowen, Emma Klein, 156 St. Auburn Avenue, Detroit, Mich.
1869. Bowen, George W., 232 East Washington Street, Fort Wayne, Ind.
1871. Bowie, Alonzo P., 87 Main Street, Uniontown, Pa.
1869. Bowman, Benjamin, Chambersburg, Pa.
1889. Bowman, Frederick C., 203 Second Avenue, West Duluth, Minn.
1891. Boyd, John S., New Brighton, Pa.
1870. Boyer, Francis W., Pottsville, Pa.
1901. Boyle, Charles C., 49 West 37th Street, New York, N. Y.
1874. Boynton, Frank H., 36 West 50th Street, New York, N. Y.
1903. Brackett, Elizabeth Annaastatia, 1458 Vermont Street, Boston, Mass.
1900. Bradford, George M., Mount Morris, Pa.
1869. Bradford, Thomas L., 1862 Frankford Avenue, Philadelphia, Pa.
1898. Bradford, Eli, 632 18th Street, Rock Island, Ill.
1897. Bragdon, Merritt Caldwell, 1709 Chicago Avenue, Evanston, Ill.
1891. Branin, John W., 33 Washington Street, Mount Holly, N. J.
1895. Branson, Joseph H., 1231 New Jersey Avenue, N. W., Washington, D. C.
1891. Branson, Mary, 1719 Arch Street, Philadelphia, Pa.
1895. Bray, Amanda C., 9 Walnut Street, Worcester, Mass.
1889. Bray, Nicholas, 1157 Iowa Avenue, Dubuque, Iowa.
1901. Brewer, Mary, 330 East Chelten Avenue, Germantown, Philadelphia, Pa.
1891. Brewster, Cora B., 1027 Madison Avenue, Baltimore, Md.
1891. Brewster, Flora A., 1221 Madison Avenue, Baltimore, Md.
1901. Brewster, George Franklin, N. Y. State Hom. Hospital, Middletown, N. Y.
1873. Breyfogle, Wm. L., Chicago, Illl.
1890. Brickley, Laura C., Chase and Hamilton Avenues, Cincinnati, Ohio.
1893. Briggs, Joseph Emmons, 296 Huntington Avenue, Boston, Mass.
1889. Briggs, Warren S., Germania Bank Building, St. Paul, Minn.
1893. Brigham, Homer C., "The Barnard," Central Park West and 71st Street, New York, N. Y.
1900. Broeser, Henry V., Flower Hospital, Ave. A and 63 St., New York, N. Y.
1903. Broesser, Henry V., 716 Washington Street, Hoboken, N. J.
1893. Brooks, William F., Florence, Colo.
1899. Brosius, Mary Alice, 1101 K Street, N. W., Washington, D. C.
1901. Brown, Charles A., 155 Halsey Street, Brooklyn, N. Y.
1891. Brown, Christian H., 1022 Walnut Street, Philadelphia, Pa.

1867. BROWN, EDWARD V., North Tarrytown, N. Y.
1898. Brown, Ernest C., corner Second and State Streets, Madrid, Iowa.
1893. Brown, Eugene A., 121 East Washington Avenue, Madison, Wis.
1903. Brown, E. Wilton, Mount Kisko, N. Y.
1891. Brown, Grace, corner 8th and State Streets, Bowling Green, Ky.
1892. Brown, Lucy Henrietta Alice, 68 Jackson Street, Providence, R. I.
1891. Brown, M. Belle, 39 West 51st Street, New York, N. Y.
1896. Brown, Plumb, 503 State Street, Springfield, Mass.
1898. Brown, Samuel G. A., Lockbox 99, Shippensburg, Pa.
1898. Brown, Stanley R., 287 North Broad Street, Elizabeth, N. J.
1903. Browne, Proctor Kinsman, Granite Avenue, Milton, Mass.
1897. Brownell, De Ette, Memorial Hospital, Brooklyn, N. Y.
1899. Brownell, John Robert, Perry, N. Y.
1899. Bruce, Augustus H., Gardner Building, Utica, N. Y.
1893. Bruce, Ida Norris, 1156 Springfield Avenue, Irvington, N. J.
1888. Bruce, Orpha D. B., 1302 Florida Avenue, Tampa, Fla.
1899. Brunner, Edgar P., 1108 Spring Garden Street, Philadelphia, Pa.
1894. Bryan, Joseph Harter, 221 Asbury Avenue, Asbury Park, N. J.
1895. Bryant, Edgar Reeve, 4$6 Sutter Street, San Francisco, Cal.
1894. Bryant, William Cullen, 64 Greene Avenue, Brooklyn, N. Y.
1900. Buchanan, T. Drysdale, 328 W. 24th Street, New York, N. Y.
1869. BUCK, JIRAH D., 124 W. 7th Street, Cincinnati, Ohio.
1900. Buckholz, Louise Z., 73 East 8th Street, New York, N. Y.
1868. BUDLONG, JOHN C., 604 Westminster Street, Providence, R. I.
1898. Budlong, Martin Salisbury, 604 Westminster Street, Providence, R. I.
1901. Buell, Edwin C., 449 South Hill Street, Los Angeles, Cal.
1873. BUFFAM, JOSEPH H., 34 Washington Street, Chicago, Ill.
1892. Bull, William H. H., 35 Park Place, Bloomfield, N. J.
1887. Bullard, J. Arthur, Wilkesbarre, Pa.
1903. Bunn, Frank Caulkins, 139 Glenwood Avenue, East Orange, N. J.
1902. Burchfield, Samuel Newton, 39 East Main Street, Titusville, Pa.
1900. Burhman, Ettie Ray, Westboro, Mass.
1891. Burling, J., Summit, N. J.
1899. Buhlingame, Frank W., McKeesport, Pa.
1899. Burnham, Norman G., 708 14th Street, Denver, Colo.
1889. Burns, Judson D., Grundy Center, Iowa.
1903. Burpee, Carroll Colby, 5 Garnet Street, Malden, Mass.
1893. Burr, William Alton, 2010 Welton Street, Denver, Colo.
1886. Burritt, Alice, 1129 14th Street, N. W., Washington, D. C.
1899. Burritt, Martha Clark, 313 5th Street, S. E., Washington, D. C.
1883. Burroughs, Amelia, 31 Massachusetts Avenue, Boston, Mass.
1903. Bush, Charles W., 444 Massachusetts Avenue, Boston, Mass.
1875. BUTLER, CLARENCE W., 35 Fullerton Avenue, South Montclair, N. J.
1903. Butler, David P., Rutland, Mass.
1873. BUTLER, WILLIAM M., 507 Clinton Avenue, Brooklyn, N. Y.
1901. Butman, Emma Willard, 1758 Erie Street, Toledo, Ohio.
1898. Button, Lucius Lucine, 265 Alexander Street, Rochester, N. Y.

1892. Cahill, Eliza B., Westminster, Copley Square, Boston, Mass.
1895. Calderwood, Samuel Herbert, 221 Warren Street, Boston, Mass.
1903. Caldwell, William, 7 John Street, Providence, R. I.
1897. Calhoun, John Charles, 803 Arch Street, Allegheny, Pa.
1899. Cameron, Ida B., 2653 Howard Street, San Francisco, Cal.
1899. Campbell, Duncan, Woodbury, N. J.
1894. Campbell, Eugene, 315 South Broadway, Los Angeles, Cal.
1876. CAMPBELL, JAS. A., 206 Mermod-Jaccard Bldg., St. Louis, Mo.
1874. CAMPBELL, MERRITT B., Patton, Cal.
1895. Campbell, Robert Alexander, Ontario, Cal.
1886. Candee, Jas. Willis, 501 Fayette Park, Syracuse, N. Y.
1873. CANFIELD, CORRESTA T., 513½ North Broadway, Pittsburg, Kan.
1894. Canney, Frederick G., 606 Sutter Street, San Francisco, Cal.
1896. Carleton, Bukk G., 75 West 50th Street, New York, N. Y.
1889. Carlson, Oscar W., 425 Milwaukee Street, Milwaukee, Wis.

1883. Carmichael, John H., 41 Maple Street, Springfield, Mass.
1891. Carmichael, Thos. H., 7127 Germantown Avenue, Germantown, Phila., Pa.
1896. Caron, George G., 30 Henry Street, Detroit, Mich.
1892. Carpenter, Willard B., 657 North High Street, Columbus, Ohio.
1891. Carr, Ada, 125 Vreeland Avenue, Paterson, N. J.
1903. Carr, George Byron, 67 North Commons Street, Lynn, Mass.
1899. Carr, Henry H., Mullica Hill, N. J.
1897. Carter, Rollin Bert, 106 Adolph Avenue, Akron, Ohio.
1897. Carter, Woodward D., 1311 South Broad Street, Philadelphia, Pa.
1882. Carvill, Alphonso H., 28 Highland Ave., Somerville Station, Boston, Mass.
1881. Case, Erastus E., 902 Main Street, Hartford, Conn.
1902. Cash, Nathan, 69 3rd Street, Uhrichsville, O.
1903. Castle, Catherine W., 5 Union Park, Boston.
1903. Castle, Catharine White, 5 Union Park, Boston, Mass.
1901. Casselberry, Melville Logan, Morgantown, W. Va.
1898. Cate, Wm. Andrew, Union Blk., Nelson, Neb.
1901. Cauffield, Edwin J., 518 South Market Street, Akron, Ohio.
1895. Chace, Nathaniel Ray, 89 Touro Street, Newport, R. I.
1903. Chadwell, Orville Rogers, 80 East Concord Street, Boston, Mass.
1897. Chadwick, John Gartside, 382 Franklin Street, Buffalo, N. Y.
1899. Chaffee, John D., 420 Cedar Avenue, Long Beach, Cal.
1891. Chalmers, Robert, 47 Pleasant Street, Woburn, Mass.
1901. Chamberlain, Nelson Hoyt, Macdonough Bldg., Oakland, Cal.
1889. Chamberlin, Myron H., Monrovia, Cal.
1902. Chamblin, Bayles, 2427 North Grand Avenue, St. Louis, Mo.
1895. Champlin, Henry William, 37 West Main Street, Bloomsburg, Pa.
1899. Champlin, John Garder, Hygeia Hotel, Block Island, R. I.
1891. Chandlee, Henry, 704 West North Avenue, Baltimore, Md.
1903. Chandler, D. Henry, Cornwall-on-Hudson, N. Y.
1901. Chandler, Jean Christie, 402 Traders' Bldg., Spokane, Wash.
1901. Chandler, Thomas Evans, 13 Sparhawk Street, Brighton, Boston, Mass.
1891. Chapin, Edward, 21 Schermerhern Street, Brooklyn, N. Y.
1903. Chapman, Harriet V., 3809 Euclid Avenue, East Cleveland, Ohio.
1875. Chapman, Millie J., 321 Smith Block, 6th Street, Pittsburg, Pa.
1901. Charles, Emily C., 51 West 127th Street, New York, N. Y.
1876. Chase, Herbert A., 950 Massachusetts Avenue, Cambridge, Mass.
1847. Chase, Hiram L., 924 Massachusetts Avenue, Cambridge, Mass.
1899. Chase, J. Oscoe, 214 East 53rd Street, New York, N. Y.
1895. Chase, Joseph, Jr., East Weymouth, Mass.
1871. Chase, Morris J., Galesburg, Ill.
1902. Chase, Sherman F., Caro, Mich.
1894. Chase, Theodore Livingstone, 1604 Walnut Street, Philadelphia, Pa.
1870. Cheney, Benj. H., 45 Elm Street, New Haven, Conn.
1895. Childs, Helen S., 454 Center Street, Jamaica Plain, Boston, Mass.
1890. Chislett, Howard Roy, 3130 Prairie Avenue, Chicago, Ill.
1891. Choate, Rufus, 3267 O Street, N. W., Washington, D. C.
1898. Christine, Gordon Maxwell, 2043 North 12th Street, Philadelphia, Pa.
1891. Church, Adaline B., 102 Huntington Avenue, Boston, Mass.
1871. Church, Charles A., 128 Prospect Street, Passaic, N. J.
1882. Church, Thomas T., 31 Lincoln Avenue, Salem, Ohio.
1900. Churchill, Frederick A., 524 Burke Building, Seattle, Wash.
1881. Clapp, James Wilkinson, 10 Park Square, Boston, Mass.
1903. Clapp, Herbert C., 334 Commonwealth Avenue, Boston, Mass.
1896. Clapp, Katherine B., 6222 Woodlawn Avenue, Chicago, Ill.
1801. Clapp, Wesley F., Fairport, N. Y.
1886. Clark, Byron G., 25 West 74th Street, New York, N. Y.
1891. Clark, Charles W., 21 Princess Street, Winnipeg, Manitoba.
1901. Clark, Dwight Freeman, Cook County Hospital, Chicago, Ill.
1901. Clark, Stanley A., South Bend, Ind.
1893. Clark, Whitman E., Three Rivers, Mich.
1894. Clarke, Harvey L., Fairbury, Neb.
1888. Clarke, Henry L., 3 Punchard Avenue, Andover, Mass.
1895. Clarke, Mortimer Hall, 221 Auburn Street, Auburndale, Mass.

1901. Clausen, Bernard, 736 Garden Street, Hoboken, N. J.
1901. Clawson, Frank A., New York, N. Y.
1887. Claypool, Albert, 2217 Fulton Street, Toledo, Ohio.
1902. Claypool, John B., 156 Furnace Street, Niles, Ohio.
1889. Clements, Frank L., 233 West Chestnut Street, Chicago, Ill.
1903. Clift, Edwin Buxton, 4 Washington Street, Fairhaven, Vt.
1888. Clossen, James H., 53 West Chelten Avenue, Germantown, Philadelphia, Pa.
1900. Cloud, Charles Higginson, 5738 Market Street, Philadelphia, Pa.
1890. Cobb, Joseph P., 254 East 47th Street, Chicago, Ill.
1898. Cobb, Sheridan G., 1852 Marshall Avenue, St. Paul, Minn.
1869. Coburn, Edward S., 91 4th Street, Troy, N. Y.
1903. Coffin, George H., Hopedale, Mass.
1895. Coffin, John Lambert, 229 Berkeley Street, Boston, Mass.
1902. Cogswell, Chas. H., Jr., M. D., Mason City, Iowa.
1866. Cogswell, Charles H., 1011 2d Avenue, Cedar Rapids, Iowa.
1900. Colburn, Frederick Wilkinson, 160 Newbury Street, Boston, Mass.
1890. Colby, Edward P., 845 Boylston Street, Boston, Mass.
1886. Colby, Edwin A., Gardner, Mass.
1903. Cole, Anna Bessie Taylor, 34 Pearl Street, Somerville, Mass.
1890. Cole, Beder A., West Lima, Wis.
1883. Cole, Edward Z., 1534 Mount Royal Avenue, Baltimore, Md.
1902. Cole, George Harvey, 311 Main Street, Conneaut, Ohio.
1899. Cole, Harlan Page, 135 Sigourney Street, Hartford, Conn.
1896. Cole, Sarah A., Lincoln, Kan.
1901. Coleman, Daniel E. S., 70 West 131st Street, New York, N. Y.
1895. Coleman, Ellenwood B., Centre Street, Nantucket, Mass.
1892. Colgrove, Charles H., Willimantic, Conn.
1902. Collins, Allen Bennett, Linesville, Pa.
1901. Collins, Clinton DeWitt, 92 State Street, Chicago, Ill.
1896. Collins, Newton M., 43 East Avenue, Rochester, N. Y.
1899. Colt, Emily S., 2327 Tracy Avenue, Kansas City, Mo.
1895. Colvin, Harvey E., 150 Cherry Street, Burlington, Vt.
1894. Colwell, Charles Estabrook, 23 South Lake Street, Aurora, Ill.
1899. Compton, George W., Ophir, Col.
1869. Compton, J. Augustine, 121 East Ohio Street, Indianapolis, Ind.
1866. Comstock, T. Griswold, 3401 Washington Avenue, St. Louis, Mo.
1899. Comstock, William C., 407 North Charles Street, Baltimore, Md.
1876. Conant, Thomas, Gloucester, Mass.
1887. Congdon, Adeline B. Dake, M. D., Bakersfield, Cal.
1894. Conklin, Frances C. Donovan, New Brighton, N. Y.
1902. Conklin, Winfield Edwin, 2814 Groveland Avenue, Chicago, Ill.
1898. Connell, Ralph W., 1707 Dodge Street, Omaha, Neb.
1901. Connell, Robert D., 427 East Long Street, Columbus, Ohio.
1895. Connett, George Cramer, 45 Washington Street, Morristown, N. J.
1902. Conrad, Chas. K., 18 East Vine Street, Mt. Vernon, Ohio.
1881. Cook, Joseph T., 636 Delaware Avenue, Buffalo, N. Y.
1892. Cook, Mary A., 2113 North 18th Street, Philadelphia, Pa.
1902. Cook, W. Casper, 501 Bijou Bldg., Pittsburg, Pa.
1886. Cooke, Persifor Marsden, 1290 Race Street, Denver, Colo.
1897. Cooley, Justus H., Somerset Avenue, Plainfield, N. J.
1981. Coolidge, John W., 334 Washington Avenue, Scranton, Pa.
1895. Coon, George S., 617 4th Street, Louisville, Ky.
1900. Coon, Marion, Hotel Ilkley, Boston, Mass.
1898. Coons, Henry Newton, 404 East Pearl Street, Lebanon, Ind.
1902. Cooper, Roy Cummings, Bank Bldg., Bellevue, Pa.
1894. Cooper, William Henry, P. O. Box 140, Oakmont, Pa.
1901. Copeland, Elmer H., 70 Elm Street, Northampton, Mass.
1892. Copeland, Royal S., 407 North Ingalls Street, Ann Arbor, Mich.
1900. Corey, Waterman F., 1305 R Street, N. W., Washington, D. C.
1888. Cornell, Albert B., Kalamazoo, Mich.
1902. Cornue, P. W., 9 Washington Street, Ypsilanti, Mich.
1894. Cort, Lottie A., 89 Division Avenue, Brooklyn, N. Y.
1899. Corwin, Elizabeth, 104 Main Street, Binghamton, N. Y.

1892. Costain, Thomas E., 100 State Street, Chicago, Ill.
1899. Cotton, Alonzo A., Vermillion, S. D.
1877. COUCH, ASA S., Fredonia, N. Y.
1901. Courtney, John F., 916 Hamilton Street, Lockport, Ill.
1890. Coutant, George F., La Salle, Ill.
1892. Cowell, Joseph H., 301 South Warren Avenue, Saginaw, Mich.
1875. COWPERTHWAITE, ALLEN C., 31 Washington Street, Chicago, Ill.
1897. Cowperthwaite, Joseph Erving, 9, 10, 11 Owsley Block, Butte, Mont.
1894. Cox, Edward Gilbert, 261 State Street, Albany, N. Y.
1894. Cox, Frederick Joseph, 109 State Street, Albany, N. Y.
1895. Cox, George A., 80 South Swan Street, Albany, N. Y.
1902. Cramer, Norman A., Loveland, Colo.
1898. Cramer, Wm. E., 1103 Main Street, Kansas City, Mo.
1878. CRANCH, EDWARD, Erie, Pa.
1903. Crane, Clarence, 228 Huntington Avenue, Boston, Mass.
1874. CRANK, CHAS. D., 106 Auburn Avenue, Cincinnati, Ohio.
1883. Crawford, Alex. K., 1066 12th Street, Oakland, Cal.
1898. Crawford, John Martin, Auburn Avenue, Cincinnati, Ohio.
1892. Crawford, Katherine M., 204 East Market Street, York, Pa.
1896. Crisand, Carl, 2 Charlotte Street, Worcester, Mass.
1893. Crismore, John M., Helena, Sandusky Co., Ohio.
1900. Crichton, Macpherson, 1229 H Street, N. W., Washington, D. C.
1891. Crowther, Isaac, 700 Madison Street, Chicago, Ill.
1895. Crocker, Harry Clinton, 194 Smith Street, Providence, R. I.
1885. Crosby, George W., 716 Atlantic Avenue, Atlantic City, N. J.
1869. CROSS, HIRAM B., 21 Seavern's Avenue, Jamaica Plain, Boston, Mass.
1901. Crum, Harry Herbert, 212 Hazen Street, Ithaca, N. Y.
1896. Crum, Josephus D., 314 North Ball Street, Owosso, Mich.
1894. Crumrine, Charles G., 1444-1445 Majestic Building, Detroit, Mich.
1895. Crump, Walter Gray, 693 Madison Avenue, New York, N. Y.
1900. Culin, William Davis, 855 North 41st Street, Philadelphia, Pa.
1902. Cummer, Robt. J., 734 Rose Bld., Cleveland, Ohio.
1901. Cummings, Charles S., 40 Oak Street, Middleboro, Mass.
1881. Cummings, M. Louisa, 178a Tremont Street, Boston, Mass.
1901. Cummins, Frank M., Warwick, N. Y.
1892. Curran, Edwin J., Oil City, Pa.
1867. CURRIER, CHRISTOPHER B., 921½ Geary Street, San Francisco, Cal.
1903. Currier, Mary Barnard, 345 Broadway, Somerville, Mass.
1897. Curtis, Harry N., 314 2d Street, Marietta, Ohio.
1902. Curtis, Helen Endora, 314 2d Street, Marietta, Ohio.
1894. Cushman, Mary Floyd, Main Street, Castine, Me.
1867. CUSHING, ALVIN M., 137½ State Street, Springfield, Mass.
1889. Custis, George W. N., 112 East Capitol Street, Washington, D. C.
1879. Curtis, J. B. Gregg, 912 15th Street, N. W., Washington, D. C.
1892. Custis, Marvin A., 626 East Capitol Street, Washington, D. C.
1900. Cyphers, Edward O., 378 Washington Avenue, Belleville, N. J.

1866. DAKE, BENJ. F., Pasadena, Cal.
1881. Dake, Charles, Hot Springs, Ark.
1887. Dake, Frank B., Hot Springs, Ark.
1877. DAKE, WALTER M., 218 North Vine Street, Nashville, Tenn.
1872. DAKE, WILLIAM C., 218 North Vine Street, Nashville, Tenn.
1903. Dalrymple, Alfred Tomlinson, 171 K Street, Boston, Mass.
1902. Damon, G. J., Medina, Ohio.
1879. Danforth, Loomis L., 59 West 52d Street, New York, N. Y.
1892. Darby, Edward A., 5 School Street, Amherst, Mass.
1892. Darby, Margaret G., 5 School Street, Amherst, Mass.
1903. Davies, George Allen, 309 Liberty Street, Warren, Pa.
1902. Davies, J. Norman, 209 3d Street, Warren, Pa.
1901. Davies, Thomas F., 359 West 116th Street, New York, N. Y.
1899. Davies, Charles A., 1010 15th Street, N. W., Washington, D. C.
1875. DAVIS, FIELDING L., 209 Locust Street, Evansville, Ind.

1899. Davis, Frederick A., 80 Huntington Avenue, Boston, Mass.
1878. Davis, John E. L., 743 Madison Avenue, New York, N. Y.
1892. Davis, John Jefferson, 504 Monument Square, Racine, Wis.
1901. Davis, Oliver Comstock, 323 Jefferson Street, Joliet, Ill.
1899. Davis, Thomas S., 603 Park Avenue, Plainfield, N. J.
1892. Day, George F., 1405 Rhode Island Avenue, N. W., Washington, D. C.
1891. Day, Leonidas A. L., 553 State Street, Chicago, Ill.
1887. Deady, Charles, 151 West 73d Street, New York, N. Y.
1901. Deady, Howard Percy, Liberty, N. Y.
1893. Dean, George A., 1103 Main Street, Kansas City, Mo.
1903. Dean, Hubert Tidd, 8 Chester Street, Readville, Mass.
1897. Dean, Louis W., Gardner Building, Utica, N. Y.
1903. Dean, Mary Mead, 901 North Calvert Street, Baltimore, Md.
1900. Dearborn, Frederick Myers, 146 West 57th Street, New York, N. Y.
1891. Dearborn, Henry M., 146 West 57th Street, New York, N. Y.
1893. De Baun, Edwin, 142 Main Avenue, Passaic, N. J.
1902. De Camp, Frank Hurd, 410 William Street, Elmiria, N. Y.
1888. Defendorf, John J., Ionia, Mich.
1903. Defriez, William Peabody, 537 Washington Street, Brookline, Mass.
1899. Dehoff, John W., 453 West Market Street, York, Pa.
1897. Delabarre, Walter E., 222 West 59th Street, New York, N. Y.
1874. Delamater, Nicholas B., 31 Washington Street, Chicago, Ill.
1892. Delap, Silas C., 1214 Main Street, Kansas City, Mo.
1881. Demarest, John H., 59 West 126th Street, New York, N. Y.
1869. Dennis Laban, 30 Central Avenue, Newark, N. J.
1890. Dennison, Ira Warren, 1312 L Street, N. W., Washington, D. C.
1891. DePuy, Richard G., Jamestown, N. D.
1858. Detwiller, John J., Easton, Pa.
1902. Devitt, Frederick Wm., Deep River, Conn.
1901. Devereaux, Jane S., 78 Pleasant Street, Marblehead, Mass.
1889. Dewey, Willis A., Ann Arbor, Mich.
1901. Dickie, Perry ,17 Schermerhorn Street, Brooklyn, N. Y.
1900. Dieffenbach, William H., The Rockingham, S. E. corner Broadway and 56th Street, New York, N. Y.
1902. Diehel, Wm. H., 505 Mack Street, Detroit, Mich.
1899. Diemar, Lena Hess, 15 Everett Street, Cambridge, Mass.
1893. Dillingham, Thomas Manly, 8 West 49th Street, New York, N. Y.
1902. Dillman, Daniel, Chippewa Lake, Ohio.
1883. Dillow, Geo. M., 223 West 57th Street, New York, N. Y.
1887. Dills, Malcolm, Carlisle, Ky.
1902. Dimon, Robert B., Hot Springs, Ark.
1878. Dinsmore, Samuel W. S,, Sharpsburg, Pa.
1898. Dittmer, Ernest G., Manchester, Iowa.
1892. Dodd, Harry Lee, Chestertown, Md.
1895. Dodge, Charles E., 913 Elm Street, Manchester, N. H.
1902. Dodge, John B., St. Johns, Mich.
1891. Dolan, A. Stanley, Patton, Cal.
1901. Doremus, Widmer E., Flower Hospital, Avenue A. and 63d Street, New York, N. Y.
1872. Doughty, Francis E., 512 Madison Avenue, New York, N. Y.
1895. Dowe, Frank LeC., South Boulevard and Briggs Avenue, New York, N. Y.
1887. Dowling, John W., 116 West 48th Street, New York, N. Y.
1879. Dowling, Joseph Ivimey, 223 State Street, Albany, N. Y.
1895. Drake, Franklin Joseph, Webster City, Iowa.
1903. Drake, Harlow B., 32 Adams Street, Detroit, Mich.
1895. Drake, Joseph H., 2201 Cottage Grove Avenue, Des Moines, Iowa.
1871. Drake, Olin M., 70 Huntington Avenue, Boston, Mass.
1900. Drury, Alfred, 122 Broadway, Paterson, N. J.
1869. Dudley, Pemberton, 1405 North 16th Street, Philadelphia, Pa.
1892. Duffield, Alfred Manley, Citronelle, Ala.
1899. Duffield, Alice Virginia, 100 State Street, Chicago, Ill.
1900. Duncan, Francis, 100 State Street, Chicago, Ill.

1899. Dunham, George Perry, 252 Broadway, Lawrence, Mass.
1895. Dunlevy, Rita, 328 West 57th Street, New York, N. Y.
1891. Dunn, Charles N., 300 East Broadway, Centralia, Ill.
1891. Dwinell, Byron L., Taunton, Mass.

1899. Ealer, Percy H., 815 North 24th Street, Philadelphia, Pa.
1897. Earl, George H., 153 Newbury Street, Boston, Mass.
1891. Eaton, Charles Woodhull, 420 Walnut Street, Des Moines, Iowa.
1893. Eaton, Cora E. Smith, 717 Masonic Temple, Minneapolis, Minn.
1895. Eaton, Samuel Lewis, Newton Highlands, Mass.
1902. Ecki, Simon, P., 365 Park Avenue, West, Mansfield, Ohio.
1897. Eddy, Ermina Catherine, 500 William Street, Elmira, N. Y.
1903. Edgar, William Ladell, 503 Main Street, Athol, Mass.
1902. Edmunds, Charles W., Sixth and Adams Streets, Bay City, Mich.
1871. EDMUNDSON, WALTER F., 1321 Fifth Avenue, Pittsburg, Pa.
1895. Edwards, Franklin W., 26 Hamilton Street, Southbridge, Mass.
1900. Edwards, Laura A.
1900. Edwards, Mary L., 19 West 46th Street, New York, N. Y.
1900. Eggleston, Eugene R., 100 North Main Street, Mt. Vernon, Ohio.
1903. Ekings, Frank T., 197 Simmon Street, Paterson, N. J.
1901. Elliot, Amos H., 480 Monroe Street, Brooklyn, N. Y.
1896. Elliott, Frank, Ridge Building, Kansas City, Mo.
1901. Elliott, John Dean, Homœopathic Hospital, Pittsburg, Pa.
1895. Emerson, Frederick Lincoln, 50 Hancock Street, Dorchester, Mass.
1891. Emerson, Nathaniel Waldo, 685 Boylston Street, Boston, Mass.
1895. Emery, John Taylor Gilman, 27 Main Street, Waterborough, Me.
1900. Emery, William Gordon, 1325 L Street, N. W., Washington, D. C.
1895. Emery, Winifred Newell, 808 Main Street, Waltham, Mass.
1897. Erb, Peter, 32 Palace Arcade, Buffalo, N. Y.
1867. ERMENTRAUT, JOHN P., 44 7th Street, New York, N. Y.
1894. Erni, G. Oscar, 809 East Spring Street, New Albany, Ind.
1901. Erwin, William, Kenosha, Wis.
1892. Estep, Charles S., Washington C. H., Ohio.
1874. EVANS, ALBERT J., 155 W. Marengo Avenue, Pasadena, Cal.
1903. Evans, Charles Horace, 739 North Hoyne Avenue, Chicago, Ill.
1892. Evans, Henry J., Fayette and Carey Streets, Baltimore, Md.
1899. Evans, John A., 22 North Carey Street, Baltimore, Md.
1903. Evelith, Fred Shailer, Searsport, Me.
1875. EVERETT, AMBROSE S.
1902. Everett, Edw., 5 East Main, Madison, Wis.
1901. Everett, Edward A., State Homœopathic Hospital, Middletown, N. Y.
1892. Everett, Frederick, 402 Centre Street, Chicago, Ill.
1891. Everhart, Oliver T., Hanover, Pa.

1893. Fackler, Joshua M., Plymouth, Ohio.
1871. FAGER, CHARLES B., 120 Walnut Street, Harrisburg, Pa.
1882. Fahnestock, Joseph C., Piqua, Ohio.
1901. Farley, William Chase, 117 Haverhill Street, Lawrence, Mass.
1902. Faust, Frederick A., 21 East Platt Avenue, Colorado Springs, Colo.
1887. Faust, Louis, Schenectady, N. Y.
1901. Faust, William P., 22 Jay Street, Schenectady, U. Y.
1892. Fawcett, John M., 1116 Market Street, Wheeling, W. Va.
1899. Fay, George DeWitt, 23 Bay View Avenue, Atlantic Highlands, N. J.
1890. Fellows, C. Gurnee, 70 State Street, Chicago, Ill.
1892. Fellows, William Edwin, 134 Hammond Street, Bangor, Me.
1901. Fenton, Susan J., 672 14th Street, Oakland, Cal.
1903. Ferguson, Franklin Archie, Trull Hospital, Biddeford, Me.
1901. Ferree, Judson A., Sidney, Ohio.
1903. Fessenden, Charles Hill, 34 Pelham Street, Newton Center, Mass.
1868. FINCH, EDWIN W., Center Av. and Prospect St., New Rochelle, N. Y.
1855. FINCKE, BERNHARDT, 122 Livingston Street, Brooklyn, N. Y.
1888. Finney, Everett B., 1329 N Street, Lincoln, Neb.

1893. Fischbeck, Frederick W., Newport, Ky.
1899. Fischer, John A., 505 Greene Street, Philadelphia, Pa.
1873. FISHER, A. LEROY, 315 Pigeon Street, Elkhart, Ind.
1893. Fisher, Anna M., 412 Nicollet Avenue, Minneapolis, Minn.
1873. FISHER, CHARLES E., 103 State Street, Chicago.
1901. Fisher, Arthur, Sherbrooke Street, Montreal, Can.
1895. Fiske, Edwin Rodney, 1140 Dean Street, Brooklyn, N. Y.
1867. FISKE, WILLIAM M. L., 1140 Dean Street, Brooklyn, N. Y.
1903. Fitz-Patrick, Gilbert, 100 State Street, Chicago.
1869. FLANDERS, DAVID P., Belfast, Me.
1901. Fleagle, Maurice M., 37 York Street, Hanover, Pa.
1891. Fleming, John R., 1903 Pacific Avenue, Atlantic City, N. J.
1903. Fletcher, Samuel E., 96 Grape Street, Chicopee, Mass.
1901. Fletcher, Zachary P., 23 Cottage Street, Jersey City, N. J.
1881. Flint, Almena J. Barker, 102 Huntington Avenue, Boston, Mass.
1900. Flint, Nellie C., 749 Marshall Field Building, Chicago.
1898. Flower, Frank Warren, Carthage, Mo.
1901. Fobes, Joseph H., 482 Park Avenue, New York, N. Y.
1896. Foote, Dellizon A., 216 Paxton Block, Omaha, Neb.
1899. Foote, Theodore, 636 Wood Street, Vineland, N. J.
1901. Foote, William Kellogg, 306 Osgood Street, Joliet, Ill.
1895. Forbes, Charles Holt, 429 School Street, Athol, Mass.
1874. FORBES, GEORGE F., 42 Williams Street, Worcester, Mass.
1898. Forbes, Wm. O., 242 Central Avenue, Hot Springs, Ark.
1895. Forsbeck, Filip A., 121 Wisconsin Street, Milwaukee, Wis.
1897. Forster, William A., 328 Rialto Building, Kansas City, Mo.
1881. Foss, David, Newburyport, Mass.
1897. Foss, John B., Creto, Neb.
1900. Foster, Herbert W., 27 South Fullerton Avenue, Montclair, N. J.
1880. Foster, Richard N., 553 Jackson Boulevard, Chicago, Ill.
1867. FOSTER, WILLIAM D., 420 West 11th Street, Kansas City, Mo.
1888. Fowler, De Witt C., Aberdeen, S. Dak.
1901. Francisco, David E., State Homœopathic Hospital, Middletown, N. Y.
1901. Franklin, Edward D., 103 Quarry Street, Ithaca, N. Y.
1899. Franklin, William A., M. D., Harvey, Ill.
1902. Franz, Ernest, Berne, Ind.
1899. Frazee, Calvin A., Illinois National Bank Building, Springfield, Ill.
1886. Freer, James A., 1523 I Street, N. W., Washington, D. C.
1894. French, Malachi R., 44 East Madison Street, Chicago, Ill.
1903. French, Winslow Burrell, 164 Huntington Avenue, Boston, Mass.
1902. Frizzell, John W., 601 Central Avenue, Great Falls, Mont.
1901. Frost, Herbert Le, 10 Hayward Street, Cleveland, Ohio.
1896. Frost, William A., Tecumseh, Mich.
1895. Fryer, Winsor F., 26 Oak Street, Middleboro, Mass.
1893. Fulford, George Howard, 233 Phillips Avenue, South, Sioux Falls, S. D.
1885. Fuller, Charles Gordon, 100 State Street, Chicago, Ill.
1895. Fuller, Walter Tracy, 31 Harvard Street, Dorchester, Mass.
1872. FULTON, HENRY W., corner Ripley and Highland Avenues, Pittsurg, Pa.
1894. Furman, Horace S., 1705 Tioga Street, Philadelphia, Pa.

1886. Gale, Charles A., Rutland, Vt.
1891. Galloway, William L., 1232 Taylor Avenue, St. Louis, Mo.
1903. Gangloff, Charles L., cor. Virginia Ave. and Maple Terrace, Pittsburg, Pa.
1900. Gann, George Willard, Du Bois, Pa.
1901. Ganow, George J., 21 Washington Avenue, Oxford, N. Y.
1899. Gardiner, William G., 1303 Pacific Avenue, Atlantic City, N. J.
1895. Gardner, Frank Augustine, 23 North Street, Salem, Mass.
1894. Gardner, Henry Seth, 823 Ken Street, Lawrence, Kan.
1899. Garis, Frank A., 220 South Broad Street, Bethlehem, Pa.
1901. Garnsey, William Smith, 93 North Main Street, Gloversville, N. Y.
1899. Garrison, Biddle Hiles, 23 Monmouth Street, Red Bank, N. J.
1903. Garrison, Howard Chew, 428 North 5th Street, Camden, N. J.

1892. Garrison, John B., 115 East 71st Street, New York, N. Y.
1900. Garrison, Joseph Sherman, Easton, Md.
1895. Gary, Clara Emerrette, 416 Marlborough Street, Boston, Mass.
1902. Gaston, Sarah P., Main Street, Niles, Ohio.
1889. Gatchell, Charles, 100 State Street, Chicago, Ill.
1902. Gault, Wm. Edward, 96 East Second Street, Portsmouth, Ohio.
1895. *Geddes, Annie Lowe, 12 Fullerton Avenue, South Montclair, N. J.
1881. Geiser, Samuel R., 770 North Crescent Avenue, Cincinnati, Ohio.
1901. Gennerich, Charles, 181 East 64th Street, New York, N. Y.
1891. Geohegan, Wm. A., 918 Hawthorne Avenue, Price's Hill, Cincinnati, Ohio.
1896. George, Edgar J., 31 Washington Street, Chicago, Ill.
1894. George, Rebecca Rogers, Ohio and Meriden Streets, Indianapolis, Ind.
1897. George, William E., Ohio and Meriden Streets, Indianapolis, Ind.
1901. Georgi, Sophia E., 1634 Pullan Street, Station A, Cincinnati, Ohio.
1901. Gibbs, Frank L., 88 West 2d Street, Chillicothe, Ohio.
1897. Gibson, David M., 241 South Jefferson Avenue, St. Louis, Mo.
1900. Gibson, Frederick M., 602 Nicollet Avenue, Minneapolis, Minn.
1897. Gifford, Edward F., 221 West 8th Street, Erie, Pa.
1869. Gifford, Gilbert L., Hamilton, N. Y.
1879. Gifford, Willis B., Attica, N. Y.
1888. Gilbert, Charles B., 1444 R. I. Avenue, N. W., Washington, D. C.
1899. Gilbert, Chas. E., 323 West 23d Street, New York, N. Y.
1891. Gilbert, Irwin B., 2027 Columbia Avenue, Philadelphia, Pa.
1899. Gilbert, Wm. Wallace, 314 South Jefferson Avenue, St. Louis, Mo.
1894. Gilchrist, James Grant, 615 North Dubuque Street, Iowa City, Iowa.
1890. Gillard, Edwin, 423 Columbus Avenue, Sandusky, Ohio.
1882. Gilman, John E., Hotel Metropole, 23d St. and Michigan Ave., Chicago, Ill.
1898. Gilstrap, H. Preston, Washington, Kan.
1901. Giren, James B., 463 9th Street, Brooklyn, N. Y.
1891. Givens, Amos Jay, Stamford, Conn.
1903. Glazier, Frederick Prentiss, 12 Lincoln Street, Hudson, Mass.
1895. Gleason, Charles Sherman, Wareham, Mass.
1897. Goddard, John, Jr., 684 Hough Avenue, Cleveland, Ohio.
1891. Goff, Ella D., 10 North Diamond Street, West Allegheny, Pa.
1897. Goldsmith, Alfred E., Greenfield, Ohio.
1899. Goodell, Chas. F., 19 East Patrick Street, Frederick, Md.
1890. Gooding, Gertrude, Bristol, R. I.
1887. Gooding, E. Jeannette, 223 West Springfield Street, Boston, Mass.
1892. Goodman, Julia, 401 Ross Street, Hamilton, Ohio.
1887. Goodno, William C., 1733 Chestnut Street, Philadelphia, Pa.
1903. Goodwin, Edward Everett, 31 Battle Street, Brockton, Mass.
1898. Gordon, Arthur Horace, 268 La Salle Avenue, Chicago, Ill.
1870. Gordon, George A., Chillicothe, Mo.
1883. Gorham, George Elmer, 214 State Street, Albany, N. Y.
1889. Gorton, Frederick T., Portage, Wis.
1899. Goss, Alice Morgan, 606 Sutter Street, Can Francisco, Cal.
1892. Gould, Herbert Dearborn, New Boston, N. H.
1890. Gould, William W., Rochelle, Ill.
1902. Graham, Alfred, 270 Woodward Avenue, Detroit, Mich.
1903. Graham, Merritt E., 1100 South Avenue, Rochester, N. Y.
1892. Graham, Walter S., Miami, Fla.
1896. Gramm, Theodore J., 846 North Broad Street, Philadelphia, Pa.
1901. Grant, George D., 16 West High Street, Springfield, Ohio.
1891. Grant, William H., Pinebluff, N. C.
1892. Graves, Kate I., 5663 Washington Avenue, Chicago, Ill.
1869. Graves, Stockbridge P., Saco, Me.
1902. Green, Arba S., 307-8 Federal Building, Youngstown, Ohio.
1881. Green, Charles L., 16 Jackson Street, Providence, R. I.
1898. Green, Julia Minerva, 1738 N Street, N. W., Washington, D. C.
1882. Green, William E., 202 Center Street, Little Rock, Ark.
1871. Greenleaf, John T., Owego, N. Y.
1896. Gregg, Edward R., 334 South Highland Avenue, Pittsburg, Pa.
1874. Gregory, Edward P., Lafayette, near State Street, Bridgeport, Conn.

1900. Griffin, Judson M., 106 Miami Avenue, Detroit, Mich.
1895. Griffith, Alexander Randall, 763 Wellington Street, Montreal, Can.
1897. Griffith, John B., Lewistown, Pa.
1891. Griffith, Lewis B., 2449 Columbia Avenue, Philadelphia, Pa.
1902. Griggs, O. P., 42 Center Street, Ashtabula, Ohio.
1899. Gross, Francis O., 1506 N. 7th Street, Philadelphia, Pa.
1875. GROSS, JAMES ELDRIDGE, 222 Schiller Street, Chicago, Ill.
1870. GROSVENOR, LEMUEL C., 185 Lincoln Avenue, Chicago, Ill.
1897. Grove, Charles E., Hyde Block, Spokane, Wash.
1900. Groves, Charles A., 303 Main Street, East Orange, N. J.
1899. Grumbrecht, Oscar L., 15 Market Street, Camden, N. J.
1903. Grundmann, J. William, 1000 West Jefferson Avenue, St. Louis, Mo.
1848. *GUERNSEY, EGBERT, 180 West 59th Street, New York, N. Y.
1875. GUERNSEY, JOSEPH C., 1923 Chestnut Street, Philadelphia, Pa.
1867. GUMPERT, BENJ. B., 840 Franklin Street, Philadelphia, Pa.
1893. Gunderlach, Charles H., 3900 Westminster Place, St. Louis, Mo.
1890. Gutherz, Lizzie G., 3689 Olive Street, St. Louis, Mo.
1898. Gwynne, Evan Edmiston, 566 Garfield Avenue, Chicago, Ill.

1901. Hadley, Chas. F., 3320 Federal Street, Camden, N. J.
1899. Haehl, Richard, Alleen Strasse, 23, Stuttgart, Germany.
1901. Haggart, George Benjamin, 153 East Main Street, Alliance, Ohio.
1901. Haight, Alfred M., 19 North Broadway, White Plains, N. Y.
1897. Haines, Charles Ter Bush, 43 Gardner Building, Utica, N. Y.
1895. Haines, Oliver Sloane, 137 North 15th Street, Philadelphia, Pa.
1887. Halbert, Homer V., 70 State Street, Chicago, Ill.
1903. Hall, Charles Francis Adams, 132 High Street, Newburyport, Mass.
1894. Hall, Matthew J., Mamaroneck, N. Y.
1874. HALL, ROBERT, 60 Cranston Street, Providence, R. I.
1885. Hall, William G., 7th and Edward Streets, St. Joseph, Mo.
1901. Hallett, G. DeWayne, 132 West 81st Street, New York, N. Y.
1896. Hallman, Victor H., Arkansas National Bank Bldg., Hot Springs, Ark.
1889. Hallock, J. Henry, Saranac Lake, N. Y.
1898. Halphide, Alvan Cavala, 3458 Wabash Avenue, Chicago, Ill.
1886. Halsey, Frederick W., 272 Newbury Street, Boston, Mass.
1893. Halsted, Milton A., Jacksonville, Ill.
1903. Ham, William Addison, 32 Ward Street, South Boston, Mass.
1901. Hamblin, Frank Milton, "Glenmary," Owego, N. Y.
1897. Hamlin, Frederick William, 130 West 48th Street, New York, N. Y.
1897. Hamlin, George Baldwin, Granada, Minn.
1889. Hanchett, Alfred P., 120 4th Street, Council Bluffs, Iowa.
1889. Hanchett, John L., Sioux City, Iowa.
1889. Hanchett, Wm. Henry, Bee Building, Omaha, Neb.
1897. Hancock, Elmer E., 1443 North 17th Street, Philadelphia, Pa.
1893. Hancock, Joseph, 1639 Columbia Avenue, Philadelphia, Pa.
1902. Handmacher, David, 2260 Broadway, Cleveland, Ohio.
1903. Handy, Harrie Delmar, Harwich, Mass.
1894. Hann, Lucy Shepard, 109 Bolton Street, West, Savannah, Ga.
1899. Hansen, Andreas Schantz, Cedar Falls, Iowa.
1903. Hanson, William G., 27 Norwood Street, Everett, Mass.
1899. Harbach, Busenbark, Lucy M., "The Iliad," Des Moines, Iowa.
1901. Hardy, Samuel Oliver, 912 West End Avenue, New York, N. Y.
1897. Hardy, William James, Belmont, N. Y.
1892. Harman, George W., 900 Broad Street, Newark, N. J.
1902. Harrell, Madison H., 96 North 10th Street, Nashville, Ind.
1897 Harrell, Samuel, North 10th Street, Noblesville, Ind.
1901. Harris, Nelson A., 339 Union Street, Hackensack, N. J.
1899. Harris, John W., 632 17th Street, Denver, Col.
1882. Harris, W. John, 3514 Lucas Avenue, St. Louis, Mo.
1897. Harrison, Herbert Alexander, 201 East 23d Street, New York, N. Y.
1901. Harter, Frank Dexter, Montpelier, Vt.
1901. Hartley, Arthur, 2109 W. Susquehanna Avenue, Philadelphia, Pa.
1901. Hartley, William Giveans, 335 West 34th Street, New York, N. Y.

1895. Hartman, W. Louis, University Building, Syracuse, N. Y.
1903. Harvey, Albion K., 71 High Street, Somersworth, N. H.
1903. Harvey, Frank T., 6 South Mano, Millford, Mass.
1903. Harvey, Walter Emerson, 10 North Magazine Street, Cambridge, Mass.
1895. Hasbrouck, Cornelius J., 115 State Street, Bristol, R. I.
1875. HASBROUCK, EVERITT, 410 9th Street, Brooklyn, N. Y.
1887. Hasbrouck, Sayer, 105 Broad Street, Providence, R. I.
1903. Haskins, Bertha Ladd, 494 Washington Street, Dedham, Mass.
1889. Hassell, Samuel E., Lancaster, Wis.
1892. Hassler, J. Wyllis, 1503 Poplar Street, Philadelphia, Pa.
1881. Hassler, William A., 105 North 8th Street, Allentown, Pa.
1893. Hastings, William C., 28 Downs Block, Seattle, Wash.
1857. HATCH, PHILO L., 221 Figueroa Street, Santa Barbara, Cal.
1892. Hathaway, Henry Skinner, 146 West 92d Street, New York, N. Y.
1879. Hawkes, William J., 315 South Broadway, Los Angeles, Cal.
1900. Hawkins, Ellen F., 31 West College Street, Oberlin, Ohio.
1900. Hawley, Amasa S., Phœnix, Ariz.
1896. Hawxhurst, Howard H., 1333 L Street, N. W., Washington, D. C.
1898. Hadyen, Arthur Sumner, Wall Lake, Iowa.
1901. Hays, Emma L. Boice, 2236 Monroe Street, Toledo, Ohio.
1869. HAYWARD, JOSEPH W., Taunton, Mass.
1895. Haywood, George William, 45 Hanover Street, Lynn, Mass.
1899. Haywood, Julia F., 612 West Avenue, Rochester, N. Y.
1884. Hazard, Theodore Lincoln, 12 North Clinton Street, Iowa City, Iowa.
1899. Hazeltine, Burton, Y. M. C. A. Building, Evanston, Ill.
1897. Heath, Gertrude Emma, 164 Water Street, Gardiner, Me.
1890. Hedges, Albert P., 395 Evanston Avenue, Chicago, Ill.
1868. HEDGES, SAMUEL P., 1520 Edgecomb Place, Chicago, Ill.
1887. Heilner, Herbert Franklin, Burr Building, Scranton, Pa.
1901. Heimbach, Allen E., 125 Sixth Street, Renovo, Pa.
1901. Heimbach, James M., 12 Greeves Street, Kane, Pa.
1897. Helfrich, Charles H., 542 Fifth Avenue, New York, N. Y.
1887. Helmuth, William Tod, 26 East 62d Street, New York, N. Y.
1903. Hemington, J. Glenn, 87 West Main Street, Uniontown, Pa.
1896. Hendershott, Lizzie A., Irving, Mich.
1895. Hendy, Clara A., Oak Park, Cook County, Ill.
1894. Henry, Samuel Dwyer, Excelsior Springs, Mo.
1902. Hendrix, John Oliver, Castle Building, Frederick, Md.
1892. Heritage, Alfred C., Jenkintown, Pa.
1899. Heritage, Joseph B., Langhorne, Pa.
1900. Herkimer, George R., Dowagiac, Mich.
1898. Hermann, John, 701 Jackson Street, Sioux City, Iowa.
1874. HERRON, CHARLES D., 3505 Butler Street, Pittsburg, Pa
1887. Hershberger, Joseph P., 351 East Main Street, Lancaster, Ohio.
1891. Hetherington, Judson Egbert, 1035 Warren Avenue, Chicago, Ill.
1902. Hewell, W. S., O. S and S. O. Home, Xenia, Ohio.
1885. Hicks, Susan M., "The Grand," Atlanta, Ga.
1871. HIGBEE, ALBERT E., Masonic Temple, Minneapolis, Minn.
1871. HIGBEE, CHESTER G., 130 Western Avenue, North, St. Paul, Minn.
1903. Higbie, Annie S., 177 West 73d Street, New York, N. Y.
1903. Higgins, John M., 2 Mulberry Street, Athens, Ohio.
1901. Hill, Emily L., 250 West 94th Street, New York, N. Y.
1901. Hill, George Mortimer, 4700 Grand Boulevard, Chicago, Ill.
1891. Hill, Lucy Chaloner, 492 North Main Street, Fall River, Mass.
1895. Hill, Marion Jasper, 507 Locust Avenue, Sterling, Ill.
1895. Hill, Noble Hind, 35 Huntington Avenue, Boston, Mass.
1867. HILL, ROBERT L., 553 Albion Street, Oakland Cal.
1892. Hill, W. Scott, 154 State Street, Augusta, Me.
1899. Hills, Howard B., 31 West Wood Street, Youngstown, Ohio.
1902. Hinds, Wm. Henry Weed, 52 Nashua Street, Milford, N. H.
1876. HINDMAN, DAVID R., 1901 7th Avenue, Marion, Iowa.
1901. Hinkle, Abbie A., 1039 Maple Avenue, Evanston, Ill.

1896. Hinsdale, Wilbert B., Ann Arbor, Mich.
1903. Hinson, Jacob Miller, 601 Boylston Street, Boston, Mass.
1891. Hislop, Margaret, 1630 Fourteenth Street, N. W., Washington, D. C.
1873. HITCHCOCK, DEXTER, Norwalk, Conn.
1900. Hobart, Austin Walter, 239 North Penn Avenue, Austin, Ill.
1887. Hobart, William F., Leonard, N. D.
1899. Hobson, Sarah Matilda, 5400 Madison Avenue, Chicago, Ill.
1895. Hodgdon, Frank A., 83 Salem Street, Malden, Mass.
1895. Hodge, William H., 324 Buffalo Avenue, Niagara Falls, N. Y.
1902. Hodson, Geo. Stanton, Washington Courthouse, Ohio.
1897. Hœfle, Henry C., 314 Brady Street, Davenport, Iowa.
1892. Hoey, William F., Frederica, Del.
1902. Hoff, Edwin C., The Grace Hospital, Detroit, Mich.
1901. Hoffman, James, 461 Jersey Avenue, Jersey City, N. J.
1903. Hoffmann, Walter Kloss, 328 Fort Street, West, Detroit, Michigan.
1880. Hofmann, Charles H., 510 South Highland Avenue, Pittsburg, Pa.
1897. Hollister, Frederick Kellogg, 521 Madison Avenue, New York, N. Y.
1902. Holly, Eugene, DeAlton, Owego and Main Streets, Candor, N. Y.
1903. Holmes, Mansfield Scott, Oakland, Me.
1869. HOLT, EDWARD B., Lowell, Mass.
1897. Holton, Charles Smoot, 316 Main Street, Richmond, Ky.
1903. Holverson, Howard Melvin, Garretson, So. Dak.
1903. Homer, Harriet, 551 Massachusetts Avenue, Boston, Mass.
1901. Honan, William F., Sherman Square Hotel, Broadway and 71st, New York.
1893. Honberger, Frank Henry, 360 Oakwood Boulevard, Chicago, Ill.
1894. Hood, C. Todd, 992 West Adams Street, Chicago, Ill.
1885. Hooker, Edward Beecher, 721 Main Street, Hartford, Conn.
1902. Hoover, Julia E., 145 Taylor Street, Cleveland, Ohio.
1889. Hoover, Willis C., Iquique, Chili, South America.
1896. Hopkins, William T., 65 Broad Street, Lynn, Mass.
1901. Hopper, Magnus Tate, 46 South Oxford Street, Brooklyn, N. Y.
1899. Hornby, Mary Stamper, 1 Monadnock Street, Dorchester, Mass.
1883. Horner, J. Richey, 275 Prospect Street, Cleveland, Ohio.
1888. Horning, David W., 604 Pillsbury Building, Minneapolis, Minn.
1902. Horton, Daniel J., Evans, Ohio.
1888. Hough, Walter D., 635 Main Street, Niagara Falls, N. Y.
1888. Houghton, Neidhard H., 867 Boylston Street, Boston, Mass.
1875. HOUSE, ROBBERT B., 108 East High Street, Springfield, Ohio.
1899. House, Wallace B., 203 West 113th Street, New York, N. Y.
1901. Houston, Grant, 201 North Chicago Street, Joliet, Ill.
1899. Howard, Alonzo Gale, 1977 Center Street, West Roxbury, Mass.
1900. Howard, Clarence C., 57 West 51st Street, New York, N. Y.
1883. Howard, Erving Melville, 401 Linden Street, Camden, N. J.
1881. Howe, J. Morgan, 12 West 46th Street, New York, N. Y.
1898. Howe, Warren D., 75 North Clinton Street, Chicago.
1899. Howlett, George C., Atkinson, Ill.
1901. Hoxie, Albertus Tribue, Porter Block, Grand Rapids, Mich.
1900. Hoyle, Ethelbert Petrie, 121 Geary Street, San Francisco, Cal.
1883. Hoyt, Charles, Chillicothe, Ohio.
1901. Hoyt, Eugene F., 39 West 58th Street, New York, N. Y.
1902. Hoyt, Herbert W., 75 South Fitzhugh Street, Rochester, N. Y.
1896. Hoyt, Mary O., 26 North 4th Street, Keokuk, Iowa.
1891. Hubbard, Charles H., 425 Broad Street, Chester, Pa.
1901. Hubbell, Adelbert M., 107 Winter Street, Haverhill, Mass.
1894. Hudson, Thomas Howard, 1001 Prospect Avenue, Kansas City, Mo.
1903. Hudson, Walter G., 65 Grove Street, Rutland, Vt.
1899. Hughes, Charles Wilson, 1407 West 8th Street, Wilmington, Del.
1888. Humphrey, Frank M., Box 342, Cornwall-on-Hudson, N. Y.
1898. Humphrey, Howard M., Lake City, Iowa.
1894. Humphrey, William Armine, 2235 Maplewood Avenue, Toledo, Ohio.
1899. Humphreys, Edward, Somerton, Philadelphia, Pa.
1869. HUMPHREYS, OTIS M., 1345 1st Avenue, Minneapolis, Minn.

1895. Hunt, Annie W., 217 Washington Street, Providence, R. I.
1892. Hunt, Charles Richard, 474 County Street, New Bedford, Mass.
1874. HUNT, DWIGHT B., 41 West 82d Street, New York, N. Y.
1899. Hunt, Ella G., 107 Odd Fellows Temple, Cincinnati, Ohio.
1896. Hunt, John S., Santa Monica, Cal.
1886. Hunt, Maurice P., 200 East State Street, Columbus, Ohio.
1898. Hurd, Laura B., 1301 Guererro Street, San Francisco, Cal.
1888. Hurd, S. Wright, 73 Main Street, Lockport, N. Y.
1901. Hurlburt, John W., Ohio Street, Uniopolis, Ohio.
1901. Husband, Francis H., 529 Ashmun Street, Sault Ste. Marie, Mich.
1872. HUTCHINS, HORACE S., Batavia, N. Y.
1903. Hutchinson, Henry, The Aberdeen, St. Paul, Minn.
1899. Hutchinson, John, 78 East 55th Street, New York, N. Y.
1895. Hyde, Louis D., 239 Main Street, Owego, N. Y.

1894. Irvine, Joseph Clinton, Steele Block, Denver, Col.
1897. Irving, Walter W., 121 Winconsin Street, Milwaukee, Wis.
1901. Ives, Nathaniel Holmes, 145 2d Avenue, Mount Vernon, N. Y.

1876. JACKSON, EDWARD R., 855 Locust Street, Dubuque, Iowa.
1903. Jackson, George V., 1618 Pacific Avenue, Atlantic City, N. J.
1900. Jackson, Noah, 125 28th Street, Newport News, Va.
1878. JACKSON, WILLIAM L., 76 Dudley Street, Roxbury, Boston, Mass.
1902. Jacobson, Frank Aikens, 209 Grand Street, Newburg, N. Y.
1897. James, D. Bushrod, 2005 North 12th Street, Philadelphia, Pa.
1866. JAMES, JOHN E., 1521 Arch Street, Philadelphia, Pa.
1902. James, Katharine E., 123 North Main Street, Rockford, Ill.
1891. Janney, O. Edward, 837 North Eutaw Street, Baltimore, Md.
1886. Jefferds, Henry Clarke, 603 Dekum Building, Portland, Ore.
1859. JEFFERDS, GEORGE P., Bangor, Me.
1899. Jeffrey, George Clinton, 343 Jefferson Avenue, Brooklyn, N. Y.
1902. Jend, Gustav Adolph, 1194 Payne Avenue, Cleveland, Ohio.
1896. Jenkins, Charles G., 224 Washington Avenue, South Lansing, Mich.
1899. Jenkins, George Hamilton, 139 Main Street, Binghamton, N. Y.
1891. Jenkins, Ralph, 1732 Massachusetts Avenue, N. W., Washington, D. C.
1901. Jenks, Edwin Brown, 134 East 70th Street, New York, N. Y.
1901. Jenney, Arthur Barker, 38 Franklin Street, Stoneham, Mass.
1873. JENNEY, WILLIAM H., Broadway and 12th Street, Kansas City, Mo.
1903. Jewett, David Baldwin, 224 Alexander Street, Rochester, N. Y.
1902. Jewett, Howard Clifton, 75 Vine Street, Haverhill, Mass.
1887. Jewitt, Edward H., 484 Arcade, Cleveland, Ohio.
1893. Johns, Emory B., East 2d Street, Lexington, Ky.
1902. Johnson, Anna, 5115 Liberty Avenue, Pittsburg, Pa.
1893. Johnson, Charles Frederic, 26 Market Street, Newburyport, Mass.
1902. Johnson, Charles Ward, 33 East Monroe Street, Jacksonville, Fla.
1893. Johnson, Cora May, Skowhegan, Me.
1903. Johnson, Elmon R., 220 Clarendon Street, Boston, Mass.
1876. JOHNSON, GEORGE H. T., Atchison, Kan.
1860. JOHNSON, ISAAC D., Kennett Square, Pa.
1876. JOHNSON, MARIA N., 109 South 20th Street, Philadelphia, Pa.
1870. JOHNSON, ROBERT B., Riverside, Cal.
1890. Johnson, Solomon D., 204 Grand Avenue, Milwaukee, Wis.
1886. Johnson, Theodore M., 200 Susquehanna Avenue, Pittston, Pa.
1896. Johnston, Charles L., 467 Vanderbilt Avenue, Brooklyn, N. Y.
1903. Johnston, Reuben Thomas, 469 Cumberland Street, Portland, Me.
1903. Jones, Elbert A., 78 Pleasant Street, Worcester, Mass.
1899. Jones, Everett, 1618 Beacon Street, Brookline, Mass.
1873. JONES, GAIUS J., 310 Caxton Bldg., Cleveland, Ohio.
1902. Jones, Geo. W., 310 Caxton Bldg., Cleveland, Ohio.
1867. JONES, HENRY C., 1220 South 1st Avenue, Mount Vernon, N. Y.
1892. Jones, John J., 1802 Mount Vernon Street, Philadelphia, Pa.
1875. JONES, LEONIDAS M., Brooklyn, Mich.
1898. Jones, Mary Hoffman, Hyde Park, Chicago, Ill.

1902. Jones, W. E., 3859 Page Avenue, St. Louis, Mo.
1899. Jordan, Oscar J., 704 Snyder Avenue, Philadelphia, Pa.
1902. Junkermann, Charles F., 405 North Broad Street, Lancaster, Ohio.
1889. Just, August Adolph, Crookston, Minn.

1896. Kahlke, Charles E., 3034 Michigan Avenue, Chicago, Ill.
1876. Kanouse, Abijah W., Appleton, Wis.
1902. Kapp, Michael Wm., 32 Central Office Bldg., Akron, Ohio.
1893. Karsner, Charles W., 1320 South Broad Street, Philadelphia, Pa.
1893. Karst, F. August, 636 Sedgwick Street, Chicago, Ill.
1899. Kase, Edmund Harris, 1325 Girard Avenue, Philadelphia, Pa.
1892. Kasselman, Harry Christian, Midway, Ky.
1888. Keegan, William A., 40 Clinton Avenue, S., Rochester, N. Y.
1891. Keeler, Charles B., New Canaan, Conn.
1889. Keeler, E. Elmer, 423 East Jefferson Street, Syracuse, N. Y.
1874. Keep, Caroline J. Yeomans, 308 West 36th Street, New York, N. Y.
1867. Keep, J. Lester, 460 Clinton Avenue, Brooklyn, N. Y.
1898. Kehoe, Henry C., 263 South Lime Street, Lexington, Ky.
1892. Kehr, Samuel S., Sterling, Ill.
1897. Keith, Ellen L., Winter Street, Framingham, Mass.
1895. Keith, Horace G., 317 South Broadway, Yonkers, N. Y.
1893. Keith, William E., Porter Building, San Jose, Cal.
1858. Kellogg, Edwin M., 155 Madison Avenue, New York, N. Y.
1903. Kemp, Malcom Edwin, Oskaloosa, Iowa.
1881. Kennedy, Alonzo L., 228 Pleasant Street, Brookline, Mass.
1903. Kenney, Harriet Eliza, 508 Saratoga Street, Cohoes, N. Y.
1894. Kenyon, Frances Aureola, 865 North Main Street, Providence, R. I.
1896. Kerch, Harry E., Dundee, Ill.
1903. Kern, Charles Bruce, 610 Columbia Street, Lafayette, Ind.
1894. Kerr, Harlan T., 352 West 117th Street, New York, N. Y.
1878. Kershaw, J. Martine, 3421 Washington Avenue, St. Louis, Mo.
1902. Ketchum, Frederick Grant, Postoffice Bldg., Valparaiso, Ind.
1897. Kilgour, Peter T., Hamilton Avenue, College Hill, Cincinnati, Ohio.
1900. Kimmel, Benjamin B., 822 Rose Building, Cleveland, Ohio.
1870. King, Edward H., 729 16th Street, Denver, Col.
1901. King, John B. S., 6713 Wentworth Avenue, Chicago, Ill.
1894. King, Sylvester M., Albia, Iowa.
1897. King, Walter Joel, Golden, Col.
1903. King, William D., 1046 5th Avenue, Pittsburg, Pa.
1891. King, William Harvey, 64 West 51st Street, New York, N. Y.
1888. King, William R., 1422 K Street, N. W., Washington, D. C.
1895. Kingsbury, Edward N., 93 Blackstone Street, Woonsocket, R. I.
1901. Kingsley, Orwin D., 19 North Broadway, White Plains, N. Y.
1891. Kingsman, Richard, 711 East Capitol Street, Washington, D. C.
1887. Kinne, Arthur B., 410 Fayette Park, Syracuse, N. Y.
1892. Kinne, Porter S., Paterson, N. J.
1869. Kinne, Theodore Y., Paterson, N. J.
1891. Kinley, Joseph B., 1401 Welton Street, Denver, Col.
1880. Kinyon, Claudius B., Ann Arbor, Mich.
1902. Kinyon, Henry E., 9 Fuller Street, Fullerton, Neb.
1870. Kippax, John R., 3154 Indiana Avenue, Chicago, Ill.
1892. Kirk, Ellen Maria, 169 West 7th Street, Cincinnati, Ohio.
1893. Kirkland, Edward, Bellows Falls, Vt.
1891. Kistler, Abraham L., 9th and Linden Streets, Allentown, Pa.
1899. Kistler, Horace Edwin, 313 Main Street, Johnstown, Pa.
1902. Klein, A. Katharine, 172 Bowers Street, Jersey City, N. J.
1903. Klein, August Andreas, 123 Blue Hill Avenue, Boston, Mass.
1899. Kline, Andrew K., Princeton, N. J.
1899. Kline, David C., 5th and Chestnut Streets, Reading, Pa.
1895. Klopp, Henry Irwin, Westboro, Mass.
1901. Knapp, Herbert J., 287 South 5th Street, Brooklyn, N. Y.
1871. Knerr, Calvin B., 1831 Chestnut Street, Philadelphia, Pa.
1887. Knight, Stephen H., 18 West Willis Avenue, Detroit, Mich.

1903. Knott, Harriet A., 203-204 Avery Bldg., Saginaw, Mich.
1899. Knowlton, Wm. Waldo, 113 South 16th Street, Philadelphia, Pa.
1896. Koch, Margaret, 1009 University Avenue, S. E., Minneapolis, Minn.
1900. Koons, Harry E., 647 Main Street, Danville, Va.
1875. KORNDOERFER, AUGUSTUS, 1728 Green Street, Philadelphia, Pa.
1897. Korndœrfer, Augustus, Jr., 142 North 18th Street, Philadelphia, Pa.
1886. Kraft, Frank, 57 Bell Avenue, Cleveland, Ohio.
1897. Krauss, James, 419 Boylston Street, Boston, Mass.
1865. KREBS, FRANCIS H., 42 Union Park, Boston, Mass.
1896. Kreider, Martin K., Goshen, Ind.
1892. Krewson, Amos D., 4613 Paul Street, Frankford, Philadelphia, Pa.
1888. Krogstad, Henry, 1524 K Street, N. W., Washington, D. C.
1899. Krusen, Edward A., Collegeville, Pa.
1899. Kurtz, Alfred J., 1420 South Broad Street, Philadelphia, Pa.

1894. Laidlaw, George Frederick, 58 West 53d Street, New York, N. Y.
1903. Lain, Rachel B., 821 Marin Street, Vallejo, Cal.
1887. Laird, Frank F., 315 South Broadway, Los Angeles, Cal.
1903. Lakeman, Mary Roper, 17 North State Street, Salem, Mass.
1903. Lamb, Frances Gertrude, 45 Portland Street, Haverhill, Mass.
1896. Lance, John D., 27 Broadway, Providence, R. I.
1899. Land, Joseph Foster, 130 West 126th Street, New York, N. Y.
1901. Lane, Chas. E., 289 Mill Street, Poughkeepsie, N. Y.
1903. Lane, Orville W., 267 Main Street, Great Barrington, Mass.
1900. Lanning, Willet Scott, Hicksville, Ohio.
1896. Lards, Charles H., 33 Butler Street, Adrian, Mich.
1898. Larkeque, Garrett Bancroft Breckinridge, 345 Main Street, Athol, Mass.
1895. Latham, Carrie Augusta, 50 Central Street, Leominster, Mass.
1899. Laughlin, Thomas Livezey, 527 River Street, Dayton, Ohio.
1894. Lawrence, George W., 5 North Tejon Street, Colorado Springs, Col.
1885. Lawshe, John Z., 150 West Peachtree Street, Atlanta, Ga.
1891. Layman, Alfred, 1630 North 18th Street, Philadelphia, Pa.
1901. Lazarus, Geo. F., 10 Caton Avenue, Brooklyn, N. Y.
1898. Leake, Endell N., 237 West Sixth Street, Fremont, Neb.
1889. Leal, Malcolm, 107 West 48th Street, New York, N. Y.
1901. Leao, Francisco Garcia P., 17 State Street, New York, N. Y.
1903. Leavitt, Mary Augusta, Mas. Hom. Hospital, E. Concord St., Boston, Mass.
1882. Leavitt, Sheldon, 4665 Lake Avenue, Chicago, Ill.
1899. Lee, George Hyde, 1620 15th Street, N. W., Washington, D. C.
1888. Lee, John Mallory, 121 Lake Avenue, Rochester, N. Y.
1903. Lee, Wesley Terence, 254 Broadway, Somerville, Mass.
1901. Leeds, Frank R., Main Street, Waterville, N. Y.
1901. Leevey, Martin E. Kyle, 513 West 7th Street, Cincinnati, Ohio.
1903. LeFevere, George L., Mason Block, Muskegon, Mich.
1890. Lefferts, Franklin P., Belvidere, N. J.
1900. Leib, Edwin Roy, 49 Pleasant Street, Worcester, Mass.
1899. Leipold, William C. A., 3702 Lake Avenue, Chicago, Ill.
1897. Leitch, Robert Newton, Lerna, Ill.
1890. Leland, Aaron G., Whitewater, Wis.
1891. Leland, Clarence H., 202 Merrimack Street, Lowell, Mass.
1896. Lenfestey, John A., 8 South Gratiot Avenue, Mount Clements, Mich.
1891. Lentz, Levi R., Fleetwood, Pa.
1882. Leonard, William E., 1809 Portland Avenue, Minneapolis, Minn.
1899. Leopold, H. Preston, 310 Chelten Avenue, Germantown, Pa.
1886. Le Seuer, John Wesley, Batavia, Genesee County, N. Y.
1888. Le Seuer, Oscar, 32 West Adams Avenue, Detroit, Mich.
1902. Leslie, Samuel Brewster, Okmulgee, I. T.
1903. Lewis, Edwin Ray, 865 Central Street, Franklin, Mass.
1897. Lewis, Frederick Daniel, 188 Franklin Street, Buffalo, N. Y.
1902. Lewis, Fred Lyman, 1854 Pearl Street, Cleveland, Ohio.
1877. LEWIS, F. PARK, 454 Franklin Street, Buffalo, N. Y.
1871. LEWIS, HENRY M., "The Florence," 18th St. and 4th Av., New York, N.Y.
1880. Lewis, Joseph, 330 National Avenue, Milwaukee, Wis.

1899. Lewis, J. Perry, 28th Street and National Avenue, San Diego, Cal.
1899. Lichtenwalner, Abbott B., 2435 North 7th Street, Philadelphia, Pa.
1893. Light, Jacob Wilbert, Kingman, Kan.
1895. Lines, Mary Louise, 285 Washington Avenue, Brooklyn, N. Y.
1887. Linn, Alexander M., 605 Walnut Street, Des Moines, Iowa.
1893. Linn, Ellis Gregg, 134 North Main Street, Mt. Pleasant, Iowa.
1885. Linnell, Edward H., 61 Broadway, Norwich, Conn.
1895. Lippett, Louis David, 41 Pocasset Avenue, Olneyville, R. I.
1893. Llewellyn, Henry S., N. E. c. 5th and Harris Aves., La Grange, Ill.
1903. Lobdell, Alban J., Winchester, N. H.
1893. Loelkes, George, 202 Jackson Street, Belleville, Ill.
1901. Long, Charles H., Sterry Block, Pontiac, Ill.
1901. Loring, Benjamin Tappan, 229 Berkeley Street, Boston, Mass.
1900. Lothrop, Edwin S., 807 East Capitol Street, Washington, D. C.
1900. Lounsbery, George, 514 Virginia Street, Charleston, W. Va.
1899. Low, Joseph H., 2458 Indiana Avenue, Chicago, Ill.
1890. Lowe, Thomas, Slayton, Minn.
1885. Lowenthal, Louis, 1405 West 103d Street, Chicago, Ill.
1873. Lukens, Merriken B., 159 Loyd Street, Atlanta, Ga.
1900. Lund, Frederic Albert, 512 Madison Avenue, New York, N. Y.
1896. Lunger, Justus S., East Water Street, Prospect, Ohio.
1901. Lutze, Frederick Henry, 212 Keap Street, Brooklyn, N. Y.
1897. Luyties, Carl J., 2100 Lafayette Avenue, St. Louis, Mo.
1900. Lyon, George Gaines, Pollock Building, Mobile, Ala.
1902. Lytle, Joseph Allgyer, 718 Rose Bldg., Cleveland, Ohio.
1899. Lyon, Melvern S., 716 Atlantic Avenue, Atlantic City, N. J.
1899. Lyons, Matilda Jamison, Cadiz, Ohio.

1895. Maas, Elizabeth C., 129 North Main Street, Rockford, Ill.
1890. MacCracken, William P., 4327 Greenwood Avenue, Chicago, Ill.
1891. MacDonald, Thomas L., 1402 Massachusetts Ave., N. W., Washington, D. C.
1891. Macfarlan, Duncan, 3924 Chestnut Street, Philadelphia, Pa.
1868. Macfarlan, Malcolm, 1805 Chestnut Street, Philadelphia, Pa.
1901. Macfarland, Ralph L., 53 Clinton Avenue, Jamaica, N. Y.
1899. Mackenzie, George W., Somerton, Philadelphia, Pa.
1886. MacLachlin, Daniel A., 3101 Majestic Building, Detroit, Mich.
1898. Macomber, Addison P., Atlantic, Iowa.
1887. Macomber, Henry K., Pasadena, Cal.
1891. Macrum, Charles A., Marquam Block, Portland, Ore.
1901. Macy, Charles Seely, 103 W. 71st Street, New York, N. Y.
1891. Maddux, Daniel P., 8th and Madison Streets, Chester, Pa.
1895. Maeder, John G., 304 E. 120th Street, New York, N. Y.
1903. Mann, Anna Root, Stamford Hall, Stamford, Conn.
1898. Mann, Eugene Langdon, 694 Endicott Arcade, St. Paul, Minn.
1901. Mann, George E., Mason, Mich.
1896. Mann, Jesse E., Fonda Block, Louisville, Ky.
1895. Mann, Martha Elizabeth, 2 Commonwealth Avenue, Boston, Mass.
1900. Mann, William O., East Concord Street, Boston, Mass.
1881. Mansfield, Job R., 4852 Main Street, Germantown, Philadelphia, Pa.
1903. Marden, Wilmot Leighton, 171 Lewis Street, Lynn, Mass.
1900. Marsh, Guy C., 209 South Market Street, Galion, Ohio.
1901. Marsh, Horatio Richmond, Port Barrow, Alaska.
1892. Marshall, Anna M., 1420 Chestnut Street, Philadelphia, Pa.
1890. Marshall, Robert S., 424 Shady Avenue, Pittsburg, Pa.
1902. Martin, Chas. Velas, 2814 Groveland Avenue, Chicago, Ill.
1871. Martin, Constantine H., Allentown, Pa.
1893. Martin, Eleanor Frances, 606 Sutter Street, San Francisco, Cal.
1893. Martin, Francis V., 808 Franklin Street, Michigan City, Ind.
1899. Martin, Frederick H., Edgerton, Wis.
1895. Martin, George Albert, Boone, Boone County, Iowa.
1891. Martin, George Forrest, 19 Paige Street, Lowell, Mass.
1889. Martin, George H., 606 Sutter Street, San Francisco, Cal.
1901. Martin, Harvey H., 710 Jefferson Street, La Porte, Ind.

1891. Martin, Lynn Arthur, 74 Exchange Street, Binghamton, N. Y.
1900. Martin, Robert Wilkie, 1831 Chestnut Street, Philadelphia, Pa.
1892. Martin, Truman J., 245 North Street, Buffalo, N. Y.
1878. MARTIN, WILLIAM J., 1712 Carson Street, S., South Pittsburg, Pa.
1901. Marvin, La Ray, 221 Clay Avenue, Muskegon, Mich.
1903. Mason, Gilbert McClellan, 208 Neponset Avenue, Boston, Mass.
1901. Mason, Perley Hugh, 734 South Street, Peekskill, N. Y.
1867. MASON, STEPHEN R., Devall's Bluff, Ark.
1902. Matchett, John, Summerfield, Kan.
1899. Mastin, James William, 25 18th Avenue, Denver, Col.
1892. Mattson, Alfred Simmons, Bee Bldg., Omaha, Neb.
1894. Maurer, Joseph M., 59 West Wheeling Street, Washington, Pa.
1903. Maxwell, George B., Seattle, Wash.
1892. Maxwell, Lewis K., 1615 22d Street, Toledo, Ohio.
1895. May, Geo. Elisha, 661 Commonwealth Avenue, Newton Centre, Mass.
1887. Maycock, Burt J., 33 Allen Street, Buffalo, N. Y.
1891. Mayer, Charles R., 1032 St. Charles Avenue, New Orleans, La.
1903. Maynard, Herbert Ernest, 76 Church Street, Winchester, Mass.
1899. McBean, George Martin, 3326 Vernon Avenue, Chicago, Ill.
1902. McBride, Lewis E., 78 13th Street, Franklin, Pa.
1902. McBurney, Benj. A., 200 South Park Avenue, Austin Station, Chicago.
1901. McCann, T. Addison, 115 North Perry Street, Dayton, Ohio.
1902. McCauley, E. S. H., Beaver, Pa.
1896. McCauley, John C., 320 Connecticut Avenue, Rochester, Pa.
1900. McCleary, Joseph Roy, 224 Putnam Street, Marietta, Ohio.
1867. MCCLELLAND, JAMES H., cor. 5th and Wilkins Avenues, Pittsburg, Pa.
1879. McClelland, John B., 409 Penn Avenue, Pittsburg, Pa.
1884. McClelland, Robert Watson, cor. 5th and Wilkins Avenues, Pittsburg, Pa.
1881. McClure, Eliza Lang, 1919 Wallace Street, Philadelphia, Pa.
1902. McConkey, Thomas Graham, 406 Sutter Street, San Francisco, Cal.
1896. McCormick, A. Lee, 3110 Woodburn Avenue, Cincinnati, Ohio.
1903. McDonald, Charles Dearborn, 958 Washington Street, Bath, Me.
1874. MCDONALD, WILLIAM O., 9 West 68th Street, New York, N. Y.
1903. McDougall, Duncan, 131 Main Street, Haverhill, Mass.
1886. McDowell, Charles, 960 Park Avenue, New York, N. Y.
1891. McDowell, George W., 542 5th Avenue, New York, N. Y.
1894. McElwee, L. Claude, 1113 North Grand Avenue, St. Louis, Mo.
1874. MCGAVOCK, CLARA PLIMPTON, P. O. Box 346, Nashville, Tenn.
1869. MCGEORGE, WALLACE, 521 Broadway, Camden, N. J.
1901. McGibbon, Walter P., 53d Street and Jefferson Avenue, Chicago, Ill.
1889. McKinney, Samuel P., 979 Warren Avenue, Chicago, Ill.
1891. McKinstry, Frank P., Washington, N. J.
1901. McKnight, Wm. Clark, 219 West 135th Street, New York, N. Y.
1891. McMichael, Arkell R., 969 Madison Avenue, New York, N. Y.
1903. McMichael, Jacob E., 50 West 89th Street, New York.
1900. McNeill, Alonzo L., McMinnville, Ore.
1901. Mead, Walter Glover, Deposit, N. Y.
1895. Meade, Stephen Johnson D., 18 West 7th Street, Cincinnati, Ohio.
1891. Means, J. W., Troy, Ohio.
1894. Mellies, Charles, 3825 North 20th Street, St. Louis, Mo.
1894. Menninger, Charles Frederic, 727 Kansas Avenue, Topeka, Kan.
1891. Mercer, Edward W., 1705 Arch Street, Philadelphia, Pa.
1871. MERCER, ROBERT P., 223 West 3d Street, Chester, Pa.
1876. MERCER, WILLIAM M., 1815 Church Street, Galveston, Tex.
1898. Metcalf, Frank A., 5246 Prairie Avenue, Chicago, Ill.
1902. Metcalf, Hiram Hulbert, Chicago, Ohio.
1871. MIDDLETON, CALEB S., 1523 Girard Avenue, Philadelphia, Pa.
1869. MIDDLETON, MELBOURNE F., 423 Market Street, Camden, N. J.
1894. Miessler, C. F., Otto, Crete, Will County, Ill.
1887. Milbank, William E., 111 State Street, Albany, N. Y.
1889. Miller, Byron E., "The Dekum," Portland, Ore.
1875. MILLER, CHRISTOPHER C., 31 Winder Street, Detroit, Mich.
1895. Miller, Edward Roscoe, 15 Merriman Street, Leominster, Mass.

1902. Miller, Harry T., 113 East High Street, Springfield, Ohio.
1900. Miller, Irving, 1734 St. Paul Street, Baltimore, Md.
1899. Miller, Mary, South South Carolina Avenue, Atlantic City, N. J.
1867. MILLER, ROBERT E., Oxford, N. Y.
1898. Miller, Robert P., Evans Block, Oskaloosa, Iowa.
1888. Miller, Zachary T., 2013 Carson Street, Pittsburg, Pa.
1895. Mills, Walter Sands, 324 West 89th Street, New York, N. Y.
1896. Mills, Wesley J., Howell, Mich.
1887. Millsop, Sarah J., 8th and State Streets, Bowling Green, Ky.
1902. Minaker, Andrew J., 291 Valencia Street, San Francisco, Cal.
1900. Miner, Frederick Cohoon, 1134 Forest Avenue, New York, N. Y.
1898. Miner, James B., Charles City, Iowa.
1901. Minor, Mary Eustasia, Burch Avenue, Hyde Park, Cincinnati, Ohio.
1888. Minton, Henry Brewster, 165 Joralemon Street, Brooklyn, N. Y.
1896. Mitchell, Clifford, 70 State Street, Chicago, Ill.
1898. Mitchell, John A., 69 North 3d Street, Newark, Ohio.
1871. MITCHELL, JOHN J., Newburgh, N. Y.
1875. MITCHELL, JOHN NICHOLAS, 1505 Spruce Street, Philadelphia, Pa.
1903. Mitchell, Roy Ernest, State Hospital for Insane, Middletown, N. Y.
1903. Mize, Harlan E., 311 The Temple, Danville, Ill.
1881. Moffat, Edgar V., 476 Main Street, Orange, N. J.
1881. Moffat, John L., 1136 Dean Street, Brooklyn, N. Y.
1876. MOHR, CHARLES, Lawnton Avenue, Oak Lane, Philadelphia, Pa.
1876. MONMONIER, JULIUS L., 480 Classon Avenue, Brooklyn, N. Y.
1894. Montgomery, Phineas J., 217 4th Street, Council Bluffs, Iowa.
1891. Montgomery, Richard W., Mamaroneck, N. Y.
1896. Moon, Seymour B., 1314 8th Avenue, Beaver Falls, Pa.
1892. Moore, J. Herbert, 1339 Beacon Street, Brookline, Mass.
1898. Moorhead, James, 743 12th Street, Marion, Iowa.
1893. Mordoff, Charles H., Genoa, Ill.
1903. Moreland, George Bolton, 403 Smith Block, Pittsburg, Pa.
1884. Morgan, William L., 202 West Franklin Street, Baltimore, Md.
1890. Morgan, Willis B., 4200 North Grande Avenue, St. Louis, Mo.
1890. *Morley, Frank W., Washington Avenue, Sandusky, Ohio.
1903. Morris, Frances Morris, 138 Marlboro Street, Boston, Mass.
1890. Morris, John W., Wheeling, W. Va.
1902. Morris, Wm. Turner, 1407 Chapline Street, Wheeling, W. Va.
1894. Morrison, Frank A., Uhrichsville, Ohio.
1899. Morrow, Emory H., 943 17th Street, Altoona, Pa.
1895. Morse, Chas. W., 98 Washington Street, East Salem, Mass.
1872. MORSE, LUCIUS D., 11 Cone Street, Atlanta, Ga.
1869. MORSE, MARTIN V. B., Manchester, N. H.
1899. Moseley, George T., 202 Delaware Avenue, Buffalo, N. Y.
1891. Mosher, Mary E., 53 Blue Hill Avenue, Roxbury, Mass.
1881. Moss, Mary Denison.
1869. MOSSMAN, NATHAN A., St. Andrew's Hotel, New York, N. Y.
1901. Mowbray, J. Lincoln, 9 Benton Avenue, Walton, N. Y.
1890. Mowry, Henry P., Bronson, Mich.
1899. Mudge, Katharine G., 309 Essex Street, Salem, Mass.
1896. Mueller, Gustave A., Empire Building, Pittsburg, Pa.
1902. Muhleman, Chas., 611 Market Street, Parkersburg, W. Va.
1901. Muller, Charles Wm., 209 East 87th Street, New York, N. Y.
1901. Muller, Joseph H., 133 Littleton Avenue, Newark, N. J.
1902. Mukurjee, Amar. Nath., Children's Homœopathic Hospital. Phila., Pa.
1899. Muncie, Libbie Hamilton, 119 Macon Street, Brooklyn, N. Y.
1892. Munns, Charles O., Oxford, Ohio.
1901. Munson, Edwin Sterling, 16 West 45th Street, New York, N. Y.
1891. Munson, Milton L., 1503 Pacific Avenue, Atlantic City, N. J.
1901. Murphy, Frank Wellington, 38 South Ludlow Street, Dayton, Ohio.
1899. Murphy, Sarah A., 727½ 8th Street, Louisville, Ky.
1893. Myers, Amos J., Creston, Iowa.
1895. Myers, Charles E., 170 Green Lane, Manayunk, Philadelphia, Pa.
1901. Myers, Dean W., 345 South Division Street, Ann Arbor, Mich.

1902. Nash, Eugene B., 28 Clinton Avenue, Courtland, N. Y.
1892. Nead, Will M., 205 State Street, Albany, N. Y.
1903. Neale, Lillian Belle, 138 Marlboro Street, Boston, Mass.
1893. Neiberger, William Emory, 402 West Jefferson Street, Bloomington, Ill.
1895. Neilson, Howard Stout, 56 West 48th Street, New York, N. Y.
1899. Nevin, J. Lawrence, 158 Bowers Street, Jersey City, N. J.
1890. Newell, Robert C., 70 State Street, Chicago, Ill.
1903. Newton, Carrie E., 28 Holyoke Street, Brewer, Me.
1895. Newton, Frank Loomis, 147 Highland Avenue, Somerville, Mass.
1901. Nicholas, Geo. D., 330 2d Street, Toledo, Ohio.
1903. Nicholas, Walter Edmond, 723 Washington Street, Hoboken, N. J.
1876. NICHOLS, AMMI S., 608 Deckum Block, Portland, Ore.
1880. Nichols, Charles L., 248 Main Street, Worcester, Mass.
1903. Nichols, Frank Irwin, 108 Maplewood Terrace, Springfield, Mass.
1902. Nicholson, Harry Schuyler, 621 Arch Street, Allegheny, Pa.
1886. Nickelson, W. H., A. D. Ripley Block, Adams, N. Y.
1899. Noble, Daniel Cook, Middlebury, Vt.
1902. Nobles, Newmann T. B., 275 Prospect Street, Cleveland, Ohio.
1902. Nobles, Wm. C. E., Main Street, Littleton, N. H.
1893. Norris, Maria Whittelsey, Widdicomb Building, Grand Rapids, Mich.
1889. Norton, Arthur B., 16 West 45th Street, New York, N. Y.
1887. Norton, Claude R., 700 North 40th Street, Philadelphia, Pa.
1881. Nott, Frederick J., 554 Madison Avenue, New York, N. Y.
1889. Nottingham, David M., Lansing Mich.
1888. Nottingham, John C., 213 5th Avenue, Bay City, Mich.
1891. Nowell, John F., Greencastle, Pa.
1895. Noyes, Henry A., Pittsfield, Mass.

1882. Obetz, Henry L., 21 Duffield Street, Detroit, Mich.
1896. O'Brien, Emilie Y., 2504 19th Street, N. W., Washington, D. C.
1872. OCKFORD, GEORGE M., 36 Oak Street, Ridgewood, N. J.
1889. O'Connor, Joseph T., 7 West 42d Street, New York, N. Y.
1898. Ogden, Benj. Harvey, Ernst Bldg., St. Paul, Minn.
1897. Ogden, Edwin G.
1884. Olin, Rollin C., 110 Henry Street, West Detroit, Mich.
1890. Olmstead, Austin F., Green Bay, Wis.
1893. Olmstead, Elmer D., Spokane, Wash.
1895. Opdyke, Levings A., 55 Clinton Avenue, Jersey City, N. J.
1893. Orleman, E. Louise, 32 Bagg Street, Detroit, Mich.
1859. ORME, FRANCIS H., 70 North Forsyth Street, Atlanta, Ga.
1883. Ormes, Francis D., Jamestown, N. Y.
1901. Osmun, Elmer Douglas, Allegan, Mich.
1876. OSTROM, HOMER I., 42 West 48th Street, New York, N. Y.
1901. Otis, John Calhoun, 319 Mill Street, Poughkeepsie, N. Y.
1900. Overpeck, James W., Third and Dayton Streets, Hamilton, Ohio.
1893. Owen, Charles S., 123 Main Street, Wheaton, Ill.

1881. Packard, Horace, 470 Commonwealth Avenue, Boston, Mass.
1886. Packer, Henry E., 11 Pleasant Street, Woburn, Mass.
1895. Pagan, Frank C., Westerly, R. I.
1903. Page, Clarence Vernon, Onawa, Iowa.
1890. Paine, Clarence M., 67 North Forsyth Street, Atlanta, Ga.
1850. PAINE, HORACE M., West Newton, Mass.
1877. PAINE, N. EMMONS, West Newton, Mass.
1890. Paine, Richard K., Manitowoc, Wis.
1899. Palen, Gilbert J., Main Street and Walnut Lane, Germantown, Pa.
1891. Palmer, Anna Chipman, Houston Avenue, Mattapan, Mass.
1892. Palmer, A. Worrall, The Invernes, 210 West 57th St., New York, N. Y.
1899. Palmer, George Henry, 606 Sutter Street, San Francisco, Cal.
1902. Palmer, Harry E., 226 North Main Street, Dayton, Ohio.
1903. Palmer, John Thomas, 307 Congress Street, Portland, Me.
1848. PALMER, MILES W., 235 East 18th Street, New York, N. Y.

1892. Palmer, Owen A., 773 Republic Street, Cleveland, Ohio.
1897. Pannebaker, William Milton, 1209 Madison Avenue, Baltimore, Md.
1886. Pardee, Emily V. D., South Norwalk, Conn.
1881. Pardee, Ensign B., 74 West 48th Street, New York, N. Y.
1891. Parker, T. Elwood, Woodbury, N. J.
1896. Parkhurst, Alice S., 1410 Park Avenue, Baltimore, Md.
1883. Parsons, Anson, Springboro, Pa.
1899. Parsons, Clarice Johnston, 177 State Street, Springfield, Mass.
1888. Parsons, Edgar C., Meadville, Pa.
1879. Parsons, Katherine, 914 Prospect Street, Cleveland, Ohio.
1897. Parsons, Thomas, 213 Alexander Street, Rochester, N. Y.
1899. Partridge, Barton Scott, East Bloomfield, N. Y.
1873. PATCHEN, GEORGE H., 20 West 59th Street, New York, N. Y.
1900. Paterson, William, 1419 Lorain Street, Cleveland, Ohio.
1899. Patterson, Joseph M., 306 Commerce Building, Kansas City, Mo.
1899. Patton, Arthur Douglas, 58 Crescent Street, Montreal, Canada.
1900. Patton, Charles James, 992 Sherbrooke Street, Montreal, Canada.
1895. Patton, Hugh Matheson, 992 Sherbrooke Street, Montreal, Canada.
1900. Patton, William Mathewson, Marseilles, Ill.
1895. Paul, C. Almon, 74 Main Street, Solon, Me.
1899. Paul, Willard A., 157 Harvard Street, Dorchester, New Boston, Mass.
1892. Paul, William Kendall, Belmont, N. Y.
1891. Pauly, Charles A., Union Trust Building, Cincinnati, Ohio.
1899. Paxson, Oliver H., 1733 Arch Street, Philadelphia, Pa.
1899. Payne, Clarence Niles, 385 State Street, Bridgeport, Conn.
1867. PAYNE, FREDERICK W., 100 Boylston Street, Boston, Mass.
1899. Payne, Hannah Jones, 630 Jackson Building, Chicago, Ill.
1869. PAYNE, JAMES H., 344 Commonwealth Avenue, Boston, Mass.
1893. Payne, John Howard, Pierce Building, Copley Square, Boston, Mass.
1901. Peake, Francis, Alexandria, Minn.
1892. Pearson, Mary M., 361 West Massachusetts Avenue, Boston, Mass.
1895. Pease, Ella Gertrude, 214 Commonwealth Avenue, Boston, Mass.
1899. Peasley, Emma J., 70 Central Street, Somerville, Mass.
1897. Peck, Frederic W., 42 Park Place, New Britain, Conn.
1879. Peck, George B., 965 North Main Street, Providence, R. I.
1894. Peck, Grant S., 1427 Stout Street, Denver, Col.
1902. Peck, Harry G., Columbus, Wis.
1900. Peck, John Lyman, 332 Washington Avenue, Scranton, Pa.
1877. PENFIELD, SOPHIA, Danbury, Conn.
1870. PENNOYER, NELSON A., Kenosha, Wis.
1887. Percy, Frederick B., Brookline, Mass.
1887. Percy, George Emory, Salem, Mass.
1895. Perkins, Archie Elmer, 82 Day Street, Fitchburg, Mass.
1902. Perkins, Chas. Winfield, 403 Broad Street, Chester, Pa.
1884. Perkins, Charles W., 403 Broad Street, Chester, Pa.
1899. Perkins, Nathaniel R., 1122 Adams Street, Dorchester, Mass.
1903. Perkins, Stella Manning, 20 South Common, Lynn, Mass.
1893. Perky, Lenore, 141 South 12th Street, Lincoln, Neb.
1902. Perry, W. H., Unionville, Mo.
1901. Peterman, Julius H., Ardmore, Ind. Ter.
1900. Peters, Wilson L., Circleville, Ohio.
1898. Peterson, Alfred Cookman, 135 Geary Street, San Francisco, Cal.
1899. Peterson, Pierson B., Honesdale, Pa.
1872. PETTENGILL, ELIZA F., 300 North 10th Street, Philadelphia, Pa.
1897. Pettet, Isabella Margaretha, 308 East 15th Street, New York, N. Y.
1899. Pettit-Roberts, E. S., New Brighton, Pa.
1900. Pfeiffer, Harry Shriner, Stamford, Conn.
1901. Phelps, Charles R., Jasper Avenue, Casey, Ill.
1903. Phelps, Edith Mindwell, Calhoun, Ala.
1867. PHILLIPS, ALBERT WILLIAM, Birmingham, Conn.
1903. Phillips, Emma Arabella, 142 High Street, Pawtucket, R. I.
1902. Phillips, Joseph R., 15 East 8th Street, Erie, Pa.
1897. Phillips, Lincoln, 1104 McMillan Street, Walnut Hills, Cincinnati, Ohio.

1903. Phillips, Robert Simmons, 62 Jackson Street, Providence, R. I.
1890. Phillips, R. Oliver, 257 Warburton Avenue, Yonkers, N. Y.
1901. Phillips, William O., Flemingsburg, Ky.
1903. Phillips, Wm. H., 630 Rose Building, Cleveland, Ohio.
1899. Piatti, Virgil C., Greenwich Avenue, Greenwich, Conn.
1903. Pierce, Helen Frances, 6 North Street, Plymouth, Mass.
1899. Pierce, Oscar F., 846 West 22d Street, Chicago, Ill.
1891. Pierce, Willard Ide, 64 West 126th Street, New York, N. Y.
1899. Pierron, Henry J., 438 Greene Avenue, Brooklyn, N. Y.
1901. Pierson, William Horton, 101 McDonough Street, Brooklyn, N. Y.
1901. Pinkham, Charles B., 627½ J Street, Sacramento, Cal.
1900. Pintler, Hiram E., St. Marys, Ohio.
1899. Piper, Fred Smith, Massachusetts Avenue, Lexington, Mass.
1880. Pitcairn, Hugh, Hamburg, Germany.
1902. Plincher, Wm. Allen, 5915 Walker Street, Philadelphia, Pa.
1900. Plumb, Amy E., 913 North Fulton Avenue, Baltimore, Md.
1894. Pollock, Joseph Robert, Fort Worth, Tex.
1885. Pomeroy, Harlan, 347 Erie Street, Cleveland, Ohio.
1887. Pope, Willis G., Keeseville, N. Y.
1890. Poppele, Charles F., Mount Pulaski, Ill.
1887. Porter, Eugene H., 181 West 73d Street, New York, N. Y.
1901. Porter, John Guernsey, 404 West Main Street, Clinton, Ill.
1894. Posey, Louis Plumer, 1435 Walnut Street, Philadelphia, Pa.
1903. Post, Walter, Bloomfield, N. J.
1899. Potter, Clarence Albert, Gowanda, N. Y.
1899. Powel, Franklin, 241 East 5th Street, Chester, Pa.
1894. Powel, Milton, 163 West 76th Street, New York, N. Y.
1888. Powell, William C., Bryn Mawr, Pa.
1901. Powelson, Arthur, 351 Lenox Avenue, New York, N. Y.
1894. Powers, A. Howard, 406 Massachusetts Avenue, Boston, Mass.
1874. Pratt, Edwin H., 100 State Street, Chicago, Ill.
1900. Pratt, John W., Coatesville, Pa.
1891. Pratt, Trimble, Media, Pa.
1898. Prentis, Percy L., U. S. Immigration Office, Winnipeg, Man.
1891. Price, Eldridge C., 1012 Madison Avenue, Baltimore, Md.
1876. Price, Emmor H., 400 Georgia Avenue, Chattanooga, Tenn.
1903. Price, William Harrison, 820 Mount Hope Ave., Price Hill, Cincinnati, O.
1892. Prilay, John M., 83 Essex Street, Bangor, Me.
1889. Primm, John W., Woodstock, Ill.
1901. Pulford, William Henry, 88 North Sandusky Street, Delaware, Ohio.
1902. Pulver, Frank Augustus, 88 Water Street, Torrington, Conn.
1893. Pursell, James Perry, Doylestown, Pa.
1887. Putnam, William B., 34 Wilder Avenue, Hoosick Falls, N. Y.
1902. Putney, Willis S., Broad Street, Milford, Conn.
1899. Pyle, Harold Ward, 5 West College Street, Oberlin, Ohio.

1891. Quay, George H., 818 Rose Building, Cleveland, Ohio.
1903. Quilliams, F. F., M. D., 2802 Euclid Avenue, Cleveland, Ohio.

1901. Rabe, Rudolph F., 26 Columbia Terrace, Hoboken, N. J.
1893. Raines, Taylor E., 6th Street and Broadway, Concordia, Kan.
1897. Ralston, Rose Amanda, 52 High Street, Warren, Ohio.
1903. Rambo, William S., 43 Sophia Street, Rochester, N. Y.
1899. Ramsdell, Oscar Luman, 315½ East Mitchell Street, Petoskey, Mich.
1885. Rand, John Prentice, 74 Main Street, Monson, Mass.
1881. Rankin, Egbert G., 226 Central Park South, New York, N. Y.
1902. Rankin, John E., 1185 Dean Street, Brooklyn, N. Y.
1902. Ransom, Eliza Taylor, 373 Commonwealth Avenue, Boston, Mass.
1899. Raue, C. Sigmund, 121 North 10th Street, Philadelphia, Pa.
1896. Rauterberg, Arthur C., 510 5th Street, N. W., Washington, D. C.
1901. Raver, Carl Frost, 806½ J Street, Sacramento, Cal.

1893. Ray, William L., 1214 Main Street, Kansas City, Mo.
1882. Ray, William R., 26 Collins Street, Melbourne, Australia.
1881. Reading, 'J. Herbert, 1811 Green Street, Philadelphia, Pa.
1888. Reading, Thomas, Hatboro', Pa.
1883. Reddish, Albert W., Sidney, Ohio.
1891. Reed, Clara D. W., 140 Church Street, Newton, Mass.
1885. Reed, Robert G., Woonsocket, R. I.
1885. Reed, Thomas E., Middletown, Ohio.
1894. Rees, Owen, 314 Erie Street, Toledo, Ohio.
1888. Reeves, Joseph M., 1525 Spruce Street, Philadelphia, Pa.
1893. Regan, Milton R., Eureka Springs, Ark.
1898. Reid, John Manley, Main Street, Centerview, Mo.
1896. Reid, Robert G., Union Trust Building, Cincinnati, Ohio.
1900. Reilly, John Armstrong, Fulton, Mo.
1897. Reilly, Walter E., Fulton, Mo.
1897. Reilly, William F., 1030 Madison Avenue, Covington, Ky.
1899. Reinhold, Hannah C., 761 West 4th Street, Williamsport, Pa.
1893. Reininger, Edward C., 353 Oakley Boulevard, Chicago, Ill.
1883. Renninger, John S., Marshall, Minn.
1901. Renwick, Ward J., 102 Goff Street, Auburn, Me.
1901. Reynolds, John N., Grand Haven, Mich.
1891. Reynolds, Warren U., 320 Manhattan Avenue, New York, N. Y.
1897. Rice, Alvin B., 117 Fairmount Avenue, Jamestown, N. Y.
1895. Rice, George Brackett, 220 Clarendon Street, Boston, Mass.
1899. Rice, Harry Edwin, 685 Boylston Street, Boston, Mass.
1893. Rich, Frederick W., Riverside, Ill.
1886. Richards, George E., 44½ Bellevue Place, Chicago, Ill.
1891. Richards, George Herbert, 30 Highland Avenue, Orange, N. J.
1887. Richards, Llewellyn B., Oswego, N. Y.
1896. Richards, R. Milton, 213 Milton Avenue, Detroit, Mich.
1890. Richardson, Andrew J., 39 East 83d Street, New York, N. Y.
1903. Richardson, Arthur Hays, 39 East Eighty-third Street, New York City.
1872. Richardson, Bradbury M., 151 Milton Street, New York, N. Y.
1895. Richardson, Edward Blake, Rochester, Vt.
1900. Richardson, Francis Newton, 83 Jennings Avenue, Cleveland, Ohio.
1886. Richardson, Frank C., 685 Boylston Street, East Boston, Mass.
1891. Richardson, George W., 138 East 79th Street, New York, N. Y.
1893. Richardson, Oscar K., 303 Masonic Temple, Minneapolis, Minn.
1876. Richardson, William C., 115 Hyde Park Avenue, Tampa, Fla.
1899. Richert, Peter, Harrison, Okla.
1891. Ricker, Marcena S., 58 Lorimer Street, Rochester, N. Y.
1883. Ridge, Jonathan T., 1617 North 7th Street, Philadelphia, Pa.
1901. Ridgeway, Mary Davis, 5336 Wayne Avenue, Philadelphia, Pa.
1897. Rieger, Joseph, 9 West 4th Street, Dunkirk, N. Y.
1887. Riggs, Daniel H., 1410 11th Street, N. W., Washington, D. C.
1902. Riley, C. T., New Matamoras, Ohio.
1893. Ripley, George H., Kenosha, Wis.
1889. Ripley, Martha G., 40 South 10th Street, Minneapolis, Minn.
1899. Ritch, Orando S., 337a Macon Street, Brooklyn, N. Y.
1902. Rizer, Alfred L., 318 North Cleveland Avenue, Canton, Ohio.
1897. Roberts, Arthur Augustine, Wellsburg, W. Va.
1891. Roberts, Charles Wesley, 638 Washington Avenue, Scranton, Pa.
1892. Roberts, David J., New Rochelle, N. Y.
1901. Roberts, Dwight J., 912 Venetian Building, Chicago, Ill.
1903. Roberts, Frank Eugene, 100 Huntington Avenue, Boston, Mass.
1881. Roberts, George F., 604 Pillsbury Building, Minneapolis, Minn.
1892. Roberts, George Watson, 170 West 59th Street, New York, N. Y.
1900. Roberts, Oscar Waldo, 24 Thompson Street, Springfield, Mass.
1901. Roberts, William Burchard, Pillsbury Building, Minneapolis, Minn.
1897. Robertson, Herbert Miller, Arlington, Riverside County, Cal.
1902. Robbins, A. Jerome, Mayville and Chautauqua, N. Y.
1900. Robinson, Clarence G., 509 Clay Avenue, Jeannette, Pa.

1891. Robinson, Franklin E., Carthage, N. Y.
1899. Robinson, Nathaniel, 89 Halsey Street, Brooklyn, N. Y.
1866. ROBINSON, SAMUEL A., Takoma Park, Washington, D. C.
1893. Roby, George F., Penacook, N. H.
1899. Rockwell, Alfred E. P., 248 Main Street, Worcester, Mass.
1890. Rockwell, Cortland B., 5401 Madison Avenue, Chicago, Ill.
1881. Rockwell, John A., Box 104, Harriman, Tenn.
1899. Rockwell, John Arnold, Jr., 26 Garden Street, Cambridge, Mass.
1902. Rogers, Jesse Belmont, 118 East Sixth Street, Michigan City, Ind.
1886. Rollins, Charlotte A., Chelsea, Mass.
1903. Roosevelt, Giles Francis, Room 2, Steele Block, Denver, Col.
1903. Root, Stella A., 349 Atlantic Street, Stamford, Conn.
1901. Roper, Frederick Eugene.
1901. Roper, Pulaski B., 822 Rose Building, Cleveland, Ohio.
1882. Rosenberger, Abraham S., Covington, Ohio.
1895. Ross, Alice Idella, Whittier, Iowa.
1900. Rossiter, Edwin B., 343 High Street, Pottstown, Pa.
1886. Rounsevel, C. Sedgwick, 211 Main Street, Nashua, N. H.
1894. Rowe, Alice E., Gowanda, N. Y.
1902. Rowland, Justin E., South Euclid, Ohio.
1891. Royal, George, 505 Walnut Street, Des Moines, Iowa.
1897. Royal, T. Cook, 101 Milton Avenue, Ballston Spa, N. Y.
1897. Rudderow, Edward Douglas, 145 West 88th Street, New York, N. Y.
1890. Rumsey, Charles Leslie, 812 Park Avenue, Baltimore, Md.
1875. RUNNELS, MOSES T., 912 Walnut Street, Kansas City, Mo.
1873. RUNNELS, ORANGE S., 203 North Meridian Street, Indianapolis, Ind.
1887. Runnels, Sollis, 38 East Ohio Street, Indianapolis, Ind.
1880. Rushmore, Edward, Plainfield, N. J.
1880. Russegue, Henry E., 93 Farmington Avenue, Hartford, Conn.
1901. Russell, Antoinette E. C., 5348 Wayne Ave., Germantown, Philadelphia, Pa.
1890. Russell, Henry A., West Superior, Wis.
1892. Russell, H. Everett, 30 East 74th Street, New York, N. Y.
1901. Russell, Walter E., 25 East Main Street, Walla Walla, Wash.
1890. Rust, Edwin G., 29 Euclid Avenue, Cleveland, Ohio.

1903. Sackett, Harry Robert, 251 North Hampton Street, Holyoke, Mass.
1892. Sage, Henry P., 48 Howe Street, New Haven, Conn.
1869. SAGE, WILLIAM H., 48 Howe Street, New Haven, Conn.
1899. Sager, Cyril Wickfield, 108 West Main Street, Titusville, Pa.
1901. St. John, Arthur H., Walton, N. Y.
1894. Salisbury, Samuel Scott, Bradbury Building, Los Angeles, Cal.
1896. Sanborn, Emma M. E., 4 Morton Street, Andover, Mass.
1900. Sandel, John H., Plymouth, Pa.
1903. Sanders, Charles Barton, 475 Westford Street, Lowell, Mass.
1860. SANDERS, JOHN C., 608 Prospect Street, Cleveland, Ohio.
1890. Sanders, Orren B., 353 Commonwealth Avenue, Boston, Mass.
1867. SANFORD, CHARLES E., Bridgeport, Conn.
1895. Sanger, Henry Mortimer, 1040 Westminster Street, Providence, R. I.
1902. Sankey, B. E., 56 South Jefferson Street, New Castle, Pa.
1903. Sargent, Charles Samuel, 44 Pleasant Street, Worcester, Mass.
1871. SARTAIN, HARRIET J., 212 West Logan Square, Philadelphia, Pa.
1867. SAWIN, ISAAC W., 5580 Broadway, Providence, R. I.
1890. Sawtelle, Benjamin A., Southington, Conn.
1902. Sawyers, Frank C., 5208 Second Avenue, Pittsburg, Pa.
1893. Sawyer, Charles E., Marion, Ohio.
1898. Sawyer, Eugene W., 1416 Masonic Temple, Chicago, Ill.
1899. Sawyer, Willis Herbert, The Peabody, Ashmont Street, Boston, Mass.
1901. Scarborough, Charles W., 19 Wilmer Place, Madison, N. J.
1901. Schall, John H., 141 St. Marks Avenue, Brooklyn, N. Y.
1892. Schantz, M. Margaret Hassler, 402 North 5th Street, Reading, Pa.
1902. Schell, Samuel M., 110 North 3d Street, Hamilton, O.
1894. Schenck, Herbert Dana, 241 McDonough Street, Brooklyn, N. Y.

1875. SCHLEY, JAMES MONTFORT, 32 West 49th Street, New York, N. Y.
1902. Schlesselman, Jno. Theodore, Good Thunder, Minn.
1879. Schneider, Adoplh Benedict, 520 Rose Building, Cleveland, Ohio.
1894. Schneider, S. Newton, 236 Dearborn Avenue, Chicago, Ill.
1899. Schollenberger, Lewis A., 637 Walnut Street, Reading, Pa.
1898. Schoor, Edward, Garden City, Mo.
1901. Schreiner, Emma T., 190 Maplewood Avenue, Germantown, Phila., Pa.
1892. Schulze, Carl Andrew, 49 East Main Street, Columbus, Ohio.
1891. Schumann, Carl, Delhi, N. Y.
1891. Schwenk, Clayton S., 1319 Jefferson Street, Philadelphia, Pa.
1895. Scott, Cyrus W., 90 Main Street, Andover, Mass.
1886. Scott, William H., 104 West 44th Street, New York, N. Y.
1901. Seaman, Clayton Welch, 232 Hoyt Street, Buffalo, N. Y.
1902. Sears, Albert H., 139 West 9th Street, Anderson, Ind.
1903. Sears, Eloise A., 58 Adams Street, Waltham, Mass.
1901. Seibert, Walter W., 43 North 4th Street, Easton, Pa.
1891. Seibert, William A., Easton, Pa.
1897. Seip, Charles Lewis, 299 Union Street, New Bedford, Mass.
1869. SEIP, CHRISTIAN P., 636 Penn Avenue, Pittsburg, Pa.
1895. Seitz, William Clinton, Glen Rock, Pa.
1902. Sellew, Sylvester Wolcott, 17 Center Street, Oil City, Pa.
1897. Seward, Frederick W., Main Street, Goshen, Orange County, N. Y.
1900. Seward, Frederick W., Jr., Main Street, Goshen, N. Y.
1894. Seward, John Perry, 200 West 70th Street, New York, N. Y.
1901. Seymour, Geo. W., 40 North Portage Street, Westfield, N. Y.
1902. Shannon, Elmer Ellsworth, Ivoryton, Conn.
1879. Shannon, Samuel F., 802 North 63d Street, Philadelphia, Pa.
1892. Sharetts, Upton A., 1327 North Nevada Avenue, Colorado Springs, Col.
1902. Sharp, John R., Homœopathic Hospital, Washington, D. C.
1894. Shaw, John Cook, 23 South Sixth Street, New Bedford, Mass.
1895. Shaw, John Joseph, 14 Brewster Street, Plymouth, Mass.
1867. SHEARER, THOMAS, 345 North Charles Street, Baltimore, Md.
1890. Shearer, Thomas L., 345 North Charles Street, Baltimore, Md.
1882. Shears, George F., 3130 Indiana Avenue, Chicago, Ill.
1870. SHELDON, JAY W., 501 Fayette Park, Syracuse, N. Y.
1893. Shellenberger, Charles Nell, 1831 Wallace Street, Philadelphia, Pa.
1886. Shelton, George G., Ridgefield, Conn.
1895. Shepard, George Andrew, "The Glenmore," 7th Ave. and 55th St., N. Y.
1903. Shepherd, Hovey Leonard, 31 Church Street, Winchester, Mass.
1859. SHERMAN, JOHN H., 534 Broadway, Boston, Mass.
1899. Sherman, James Turner, 29 Virginia Street, Boston, Mass.
1901. Sherman, Le Roy B., 355 W. 14th Street, New York, N. Y.
1875. SHERMAN, LEWIS, 171 Wisconsin Street, Milwaukee, Wis.
1889. Sherman, Nancy B., 700 Massachusetts Avenue, N. E., Washington, D. C.
1897. Sherwood, Bradford Wykoff, 1117 South Salina Street, Syracuse, N. Y.
1882. Sherwood, Herbert A., Warren, Ohio.
1903. Shipman, Leander Kenny, 41 Huntington Street, New London, Conn.
1901. Shipman, Thos. Harris, 281 Benefit Street, Providence, R. I.
1900. Shirk, Samuel Martin, 35 Sumner Street, Stamford, Conn.
1898. Shoemaker, Chas. A., 1117 L Street, Lincoln, Neb.
1899. Short, Zuber N., 428 Central Avenue, Hot Springs, Ark.
1899. Shower, George T., 421 Roland Avenue, Baltimore, Md.
1891. Shreve, Joseph, 6 West Union Street, Burlington, N. J.
1902. Shuffleton, Frank A., 209 West High Street, St. Marys, Ohio.
1900. Shute, Albert Clement, 421 High Street, Pottstown, Pa.
1899. Siegfried, John P., 58 Center Street, Ashtabula, Ohio.
1896. Sigrist, Christopher W., Linden Heights, Columbus, Ohio.
1896. Sigrist, Philip H., East High Street, New Philadelphia, Ohio.
1899. Silbernagel, Chas. Edward, 1033 North High Street, Columbus, Ohio.
1901. Simonds, Edwin A., Carthage, N. Y.
1903. Simmons, Clara C., 407 Marlboro Street, Boston, Mass.
1881. Simmons, Daniel, 1188 Dean Street, Brooklyn, N. Y.

1899. Simmons, Harry Benge, 18 Market Space, Chestertown, Md.
1902. Simmons, S. E., 82 West Main Street, Norwalk, Ohio.
1888. Simmons, Silas S., Susquehanna, Pa.
1881. Simon, Samuel H., 195 Garfield Place, Brooklyn, N. Y.
1903. Simonson, Jeremiah T., 46 West 85th Street, New York, N. Y.
1899. Simpson, Edwin D., 320 West 115th Street, New York, N. Y.
1896. Sinclair, Malcolm C., 124 Sheldon Street, Grand Rapids, Mich.
1854. SISSON, EDWARD R., New Bedford, Mass.
1889. Skiles, Hugh P., 963 West Monroe Street, Chicago, Ill.
1853. SKILES, FRANCIS W., De Funiak Springs, Fla.
1899. Skinner, Scott W., Le Roy, N. Y.
1883. Slaught, James E., Warsaw, N. Y.
1891. Sleght, Bevier H. B., 31 Lincoln Park, Newark, N. J.
1900. Sloan, Malachi Wilson, 4830 Baltimore Avenue, W. Philadelphia, Pa.
1876. SLOUGH, FRANK J., Allentown, Pa.
1888. Slough, William C. J., Emaus, Pa.
1897. Small, Charles Kendall, Oakland, Cal.
1900. Small, Standley G., 152 Taggart Street, Allegheny, Pa.
1894. Smedley, Charles Davis, Wayne, Pa.
1899. Smilie, Nathan, 1524 Chestnut Street, Philadelphia, Pa.
1873. SMITH, CHESTER, Portland, Mich.
1896. Smith, Dean T., 712 East Washington Street, Ann Arbor, Mich.
1903. Smith, Erdix T., Jr., Bradford, Vt.
1899. Smith, Francis A., 18 South 4th Street, Zanesville, Ohio.
1891. Smith, George R., Dover, N. H.
1901. Smith, George Thomas, 5504 State Street, Chicago, Ill.
1882. Smith, Julia Holmes, Reliance Building, Chicago, Ill.
1887. Smith, Melvin D., 47 Ridge Street, Glens Falls, N. Y.
1885. Smith, Norman Pitt, 255 West Court Street, Paris, Ill.
1893. Smith, Orrin L., 164 North Upper Street, Lexington, Ky.
1869. SMITH, ST. CLAIR, 25 West 50th Street, New York, N. Y.
1860. SMITH, T. FRANKLIN, 264 Lenox Avenue, New York, N. Y.
1901. Smith, Milton S., La Porte, Ind.
1901. Smith, Sidney E., 77 Arlington Avenue, Brooklyn, N. Y.
1889. Smith, Wilson A., 11109 Fairfield Avenue, Morgan Park, Ill.
1894. Smith, Winfield Scott, 845 Boylston Street, Boston, Mass.
1894. Smythe, Samuel Scales, corner California and 17th Streets, Denver, Col.
1891. Snader, Edward R., 140 North 20th Street, Philadelphia, Pa.
1901. Snell, William M., Thresa, N. Y.
1887. Snyder, Edward E., Binghamton, N. Y.
1900. Snyder, Elwood S., 425 North Queen Street, Lancaster, Pa.
1897. Sommer, Henry Otto, 1227 O Street, N. W., Washington, D. C.
1891. Sooy, Walter C., 1921 Pacific Avenue, Atlantic City, N. J.
1897. Southall, Edward W., Geneseo, N. Y.
1902. Souther, Robert F., 1122 Commonwealth Avenue, Boston, Mass.
1887. Southgate, Robert W., 2 Commonwealth Avenue, Boston, Mass.
1871. SOUTHWICK, AUGUSTUS B., 107 West Liberty Street, Rome, N. Y.
1888. Southwick, George R., 31 Massachusetts Avenue, Boston, Mass.
1899. Spalding, Harry O., 50 Seavern Avenue, Jamaica Plain, Boston, Mass.
1869. SPALDING, HENRY E., 519 Beacon Street, Boston, Mass.
1895. Spalding, Julia H., 39 North Main Street, Cortland, N. Y.
1892. Spalding, Samuel H., Hingham, Mass.
1859. SPARHAWK, GEORGE E. E., 150 Bank Street, Burlington, Vt.
1899. Spencer, Annie Whitney, 25 Batavia Avenue, Batavia, Ill.
1895. Spencer, George Frederick Allen, 40 Church Street, Ware, Mass.
1901. Spencer, Hazelton, 31 Commercial Street, Sherbrooke, Quebec, Can.
1891. Spencer, William, 1820 Chestnut Street, Philadelphia, Pa.
1897. Spencer, William Francis, Geneseo, Ill.
1875. SPINNEY, ANDREW B., Reed City, Mich.
1887. Spoor, David E., North Granville, N. Y.
1892. Spranger, Michael J., 23 Adams Avenue, East, Detroit, Mich.
1882. Spreng, Theodore F. H., Iowa Building, Sioux City, Iowa.

1897. Stambach, Ida V., 1509 State Street, Santa Barbara, Cal.
1903. Stansbury, Henry H., 88 Bedford Street, Cumberland, Md.
1899. Starcke, Andrew H., 619 Kansas Avenue, Kansas City, Kan.
1891. Stark, Clinton E., Norwich, Conn.
1892. Stauffer, Alvin Packer, Hagerstown, Md.
1897. Stearns, George Raynolds, 201 Linwood Avenue, Buffalo, N. Y.
1903. Stearns, Guy B., 168 West 78th Street, New York, N. Y.
1896. Stearns, John S., 1425 Rhode Island Avenue, N. W., Washington, D. C.
1891. Stearns, Solomon S., 1425 Rhode Island Avenue, N. W., Washington, D. C.
1892. Stearns, William M., 34 Washington Street, Chicago, Ill.
1903. Stedman, James Parker, 55 West Elm Street, Brockton, Mass.
1893. Stem, Henry L., Union City, Pa.
1899. Stenhouse-Goodrich, A. Amelia, 7142 Emerald Avenue, Englewood, Ill.
1902. Stepfield, Alexander E., Doylestown, Ohio.
1902. Stephens, Chas. N., 1899 Milwaukee Avenue, Chicago, Ill.
1889. Stephens, Aaron M., 431 4th Street, Red Wing, Minn.
1892. Stephens, James Arthur, 260 Euclid Avenue, Cleveland, O.
1892. Stevens, David D., 49 West 83d Street, New York, N. Y.
1903. Stevens, Edwin Dearborn, Francestown, N. H.
1901. Stevens, Juoquine M., Traverse City, Mich.
1896. Stevens, Rollin H., 6 Adams Avenue, West Detroit, Mich.
1902. Stewart, Frank C., Indianapolis, Ind.
1897. Stewart, George Taylor, "The Rutland," Broadway & 57th St., New York.
1901. Stewart, George W., 1728 Chestnut Street, Philadelphia, Pa.
1896. Stewart, Lincoln A., Clinton, Mass.
1900. Stewart, Ralph Alexander, 143 West 76th Street, New York, N. Y.
1888. Stewart, Thos. M., 704 Elm Street, Cincinnati, Ohio.
1899. Stewart, William Alvah, 105 North Dallas Avenue, Pittsburg, Pa.
1902. Stewart, Wm. R., 129 East Ohio Street, Indianapolis, Ind.
1895. Stiles, Charles Wallace, 45 Beacon Street, Allston, Boston, Mass.
1890. Stiles, Frederick P., Sparta, Wis.
1895. Stiles, Hunter Bell, Grand Avenue, Gainesville, Tex.
1899. Stirk, James C., P. O. Box 591, Oakland, Cal.
1900. Stitzel, Jonas Wakefield, Hollidaysburg, Pa.
1879. Stone, Martha M., 914 Prospect Street, Cleveland, Ohio.
1887. Stone, Waldo H., 73 Common Street, Providence, R. I.
1902. Storer, John, 1106, 92 State Street, Chicago, Ill.
1895. Storer, John Hudson, 30 Edgecombe Avenue, New York, N. Y.
1902. Stough, Charles Francis, 122 East Kiowa Street, Colorado Springs, Col.
1882. Stout, Henry R., Jacksonville, Fla.
1903. Stowell, A. Austin, 193 Broadway, Lawrence, Mass.
1892. Stratton, Wallace C., 2255 Mission Street, San Francisco, Cal.
1899. Straughn, Clinton C., Matawan, N. J.
1891. Strawbridge, Frank A., Sigourney, Iowa.
1902. Streeter, George Dallas, 216 North 5th Street, Waco, Tex.
1903. Streeter, Howard Alvertus, 178 High Street, Clinton, Mass.
1869. STREETER, JOHN W., 2001 Prairie Avenue, Chicago, Ill.
1871. STREETS, JACOB G., Bridgeton, N. J.
1889. Strickler, David A., 705 14th Street, Denver, Col.
1880. Strong, Thomas M., 176 Huntington Avenue, Boston, Mass.
1883. Stumpf, Daniel B., 693 Ellicott Street, Buffalo, N. Y.
1890. Sturtevant, Myron C., Box 1015, Morris, Ill.
1892. Styles, Elmer L., New Britain, Conn.
1891. Suffa, George A., 220 Clarendon Street, Boston, Mass.
1902. Suganuma, Mary A., Nagasaki, Japan.
1897. Sumner, Charles Oliver, 4 Park Street, Norwood, N. Y.
1881. Sumner, Charles R., 33 South Clinton Street, Rochester, N. Y.
1887. Sutherland, John Preston, 295 Commonwealth Avenue, Boston, Mass.
1890. Suttle, Henry J., Viroqua, Wis.
1880. Swain, Mary L., 178 Huntington Avenue, Boston, Mass.
1895. Swan, Charles J., 34 Washington Street, Chicago, Ill.

1896. Swartwout, Frank A., 810 11th Street, N. W., Washington, D. C.
1879. Swartz, J. Ross, 236 North Third Street, Harrisburg, Pa.
1899. Sweet, Clara M., 14 Chestnut Street, Springfield, Mass.
1898. Sweet, E. C., 70 State Street, Chicago, Ill.
1887. Swett, Emily F., Medina, N. Y.
1897. Swift, Arthur Wesley, 501 State Street, Belvidere, Ill.
1901. Swift, Edward P., 170 West 88th Street, New York, N. Y.
1900. Sword, George P. Huntington, N. Y.
1891. Swormstedt, Lyman B., 1455 14th Street, N. W., Washington, D. C.
1895. Sylvester, Stephen Alden, Beacon Street, Newton Centre, Mass.

1900. Taber, George A., 105 West Grace Street, Richmond, Va.
1888. Talbot, George H., Newtonville, Mass.
1890. Talbot, Winthrop Tisdale, Holderness, N. H.
1897. Taylor, Alfred H., 485 H Street, S. W., Washington, D. C.
1898. Taylor, Edwin A., 34 Washington Street, Chicago, Ill.
1875. TAYLOR, ESTHER W., 36 Stedman Street, Boston, Mass.
1903. Taylor, James Ralph, Jr., 175 Sydney Street, Dorchester, Boston, Mass.
1882. Taylor, Theodore H., Evansville, Ind.
1902. Taylor, Wm. Gardiner, 216 Locust Street, Columbia, Pa.
1901. Teal, Frederick F., Norfolk, Neb.
1892. Teets, Charles E., 59 West 37th Street, New York, N. Y.
1894. Tennant, Chauncey E., 16 Steele Block, Denver, Col.
1903. Tenney, Lilla M., 331 South 3d Street, San Jose, Cal.
1875. TERRY, MARSHALL O., 196 Genesee Street, Utica, N. Y.
1901. Thatcher, William F., 411 Lintz Building, Dallas, Texas.
1902. Thego, Wm. Edgar, 1463 Cedar Avenue, Cleveland, Ohio.
1899. Theilmann, Emil, Fulton, Mo.
1899. Thomas, Arthur E., 3200 Indiana Avenue, Chicago, Ill.
1890. Thomas, Charles H., 427 Broadway, Cambridge, Mass.
1875. THOMAS, CHARLES M., 1623 Arch Street, Philadelphia, Pa.
1900. Thomas, John Wix, Phœnix, Ariz.
1903. Thomas, William Kilpack Smith, 427 Broadway, Cambridge, Mass.
1898. Thomasson, John Clay, 214 Main Street, Georgetown, Ky.
1887. Thome, Arthur G., 133 Lincoln Avenue, Chicago, Ill.
1903. Thompson, Charles Edward Percy, 2 Commonwealth Ave., Boston, Mass.
1888. Thompson, Charles S. W., Helena, Mont.
1887. Thompson, James Henry, 515 Penn Avenue, Pittsburg, Pa.
1890. Thompson, Jay J., 707 Marshall Field Building, Chicago, Ill.
1867. THOMPSON, JOHN H., 36 East 30th Street, New York, N. Y.
1887. Thompson, Landreth W., 1701 Green Street, Philadelphia, Pa.
1891. Thompson, Mark M., 805 Monroe Street, Chicago, Ill.
1867. THOMPSON, VIRGIL, 32 West 21st Street, New York, N. Y.
1891. Thompson, Will Sylvester, 173 State Street, Augusta, Me.
1902. Tilton, Nellie Morris, 15 Bartlett Street, Brockton, Mass.
1900. Tindall, Percy A., 323 Reed Street, Philadelphia, Pa.
1903. Titus, Emily N., 147 Spring Street, Portland, Me.
1903. Titus, Emily Newbold, 660 Congress Street, Portland, Me.
1887. Tobey, Walter Henry, 173 Newbury Street, Boston, Mass.
1897. Tomlin, Richard Elmer, 2057 North 8th Street, Philadelphia, Pa.
1885. Tompkins, Albert H., 20 Seavern's Ave., Jamaica Plain, Boston, Mass.
1891. Townsend, Irving, 62 West 51st Street, New York, N. Y.
1902. Trull, J. Frank, 295 Main Street, Biddeford, Me.
1890. Treat, Charles R., Jr., Sharon, Wis.
1903. Trego, Wm. E., 1463 Cedar Avenue, Cleveland, Ohio.
1896. Triem, Peter E., cor. Main and Madison Streets, Manchester, Iowa.
1888. Trotter, Richard R., 189 Warburton Avenue, Yonkers, N. Y.
1888. Tucker, Genevieve, Pueblo, Col.
1892. Tuller, John J., 1931 Chestnut Street, Philadelphia, Pa.
1899. Tupper, John Darrow, Westport, Mass.
1894. Turbin, Louis M., 103 Randolph Street, Chicago, Ill.
1892. Turner, Maurice W., 127 Harvard Street, Brookline, Mass.

1902. Turrill, Geo. Edward, 176 Euclid Avenue, Cleveland, Ohio.
1891. Tuttle, Edward G., 61 West 51st Street, New York, N. Y.
1895. Tuttle, Walter, 20 Court Street, Exeter, N. H.
1881. Tytler, George E., 113 West 126th Street, New York, N. Y.

1881. Uebelacker, Armin E., 109 South Street, Morristown, N. J.
1891. Ullrey, Arthur O., Niles, Mich.
1892. Upham, Ella Prentiss, Asbury Park, N. J.

1903. Van Artsdalen, Christopher, Ashbourne, Pa.
1889. Van Baun, William W., 1402 Spruce Street, Philadelphia, Pa.
1899. Van Delinder, Effie M., 556 Public Avenue, Beloit, Wis.
1889. Van den Burg, William H., 32 West 49th Street, New York, N. Y.
1895. Vander Burgh, David W., 320 Rock Street, Fall River, Mass.
1900. Van Duersen, George Livesay, 17 Kirk Street, Lowell, Mass.
1891. Van Deusen, Edwin H., 2105 Tioga Street, Philadelphia, Pa.
1894. Van Lennep, Gustave Adolphe, 1615 Chestnut Street, Philadelphia, Pa.
1886. Van Lennep, William B., 1421 Spruce Street, Philadelphia, Pa.
1895. Van Loon, Arthur Burton, 50 Eagle Street, Albany, N. Y.
1873. VAN NORMAN, EDGAR V., 545 South Broadway, Los Angeles, Cal.
1870. *VAN NORMAN, HORACE B., 289 Pearl Street, Cleveland, Ohio.
1901. Van Schoonhoven, Cornelius S., 1060 Lafayette Avenue, Brooklyn, N. Y.
1897. Van Scoyoc, Lloyd G., 1103 Main Street, Kansas City, Mo.
1876. VAN VLECK, PETER H., Sturgis, Mich.
1902. Varner, Anna Devinn, 616 Wood Street, Wilkinsburg, Pa.
1899. Varney, Edith Charles, 132 Broad Street, Lynn, Mass.
1896. Vehslage, Samuel H., 117 West 43d Street, New York, N. Y.
1889. *VERDI, TULLIE S., 11 Via delle Officine, Florence, Italy.
1891. Ver Nooy, Charles, 146 West 64th Street, New York, N. Y.
1889. Vidal, James W., 416 8th Street, South Fargo, N. D.
1877. VILAS, CHARLES H., 2811 Cottage Grove Avenue, Chicago, Ill.
1902. Vinyard, Guy Stewart, 1517 Welton Street, Denver, Colo.
1881. Vishno, Charles, 361 Orange Street, New Haven, Conn.
1895. Von der Luhe, Amelia D. F., 801 Driggs Avenue, Brooklyn, N. Y.
1900. Vreeland, Frank Dinwiddie, 316 Broadway, Paterson, N. J.

1900. Wage, Arnold Edwin, Granite Block, Albion, N. Y.
1897. Wage, John F., 414 Seneca Street, Buffalo, N. Y.
1893. Wagner, Philippina, Carson City, Nev.
1895. Wait, Oliver Babcock, 1230 South 57th Street, Philadelphia, Pa.
1874. WAIT, PHOEBE J. B., 412 9th Avenue, New York, N. Y.
1897. Waite, Kent B., 610 The Rose Bldg., Cleveland, Ohio.
1903. Wakefield, Sam Bell, Metropolitan Hospital, Blackwell's Island, N. Y.
1901. Wakeley, William A., 420 South Main Street, Orange, N. J.
1902. Waldo, Elmer E., 1052 Broadway, Hannibal, Mo.
1902. Walker, Hannah Ellen, 24 Shenango Street, Sharon, Pa.
1888. Walker, James M., 1257 Broadway, Denver, Col.
1902. Wallace, Charles R., Struthers, Ohio.
1902. Wallace, Homer Dawson, 214 Laycock Street, Allegheny, Pa.
1899. Walls, Charles Bruce, 1003 Warren Avenue, Chicago, Ill.
1893. Walter, Robert, Walter's Park, Pa.
1872. WALTER, ZIBA D., 107 West Seventh Street, Pueblo, Col.
1874. WALTON, CHARLES E., N. W. cor. 7th and John Streets, Cincinnati, Ohio.
1902. Waltz, Alvin L., 526 Prospect Street, Cleveland, Ohio.
1883. Wanstall, Alfred, 921 Cathedral Street, Baltimore, Md.
1899. Ward, Charles Austin, 33 Court Street, Binghamton, N. Y.
1889. Ward, Florence N., "The Wenban," 606 Sutter St., San Francisco, Cal.
1901. Ward, Henry A., Richfield Springs, N. Y.
1883. Ward, James W., "The Wenban," 606 Sutter St., San Francisco, Cal.
1891. Ward, John McE., 1915 West Susquehanna Avenue, Philadelphia, Pa.
1891. Ware, Horace B., Scranton, Pa.
1898. Waring, Guernsey P., 504 Stewart Bldg., Chicago, Ill.
1898. Warner, Alton G., 19 Schermerhorn Street, Brooklyn, N. Y.

1873. WARREN, H. ANNA, 817 Bond Street, Dennison, Texas.
1872. WARREN, JOHN K., 68 Pleasant Street, Worcester, Mass.
1900. Wasgatt, Rowland John, Rockland, Me.
1892. Washburn, Julia, 294 North Broadway, Lexington, Ky.
1873. WATERS, MOSES H., 126 North 7th Street, Terre Haute, Ind.
1901. Watson, Carl, Vendome, Toledo, Ohio.
1854. WATSON, WILLIAM H., 270 Genesee Street, Utica, N. Y.
1901. Watters, Wm. Hy., 80 East Concord Street, Boston, Mass.
1901. Watts, Edith Gertrude, Hicks Building, San Antonio, Texas.
1891. Watts, Pliny R., 1010 8th Street, Sacramento, Cal.
1893. Watts, William, 339 Huron Street, Toledo, Ohio.
1894. Waylan, Julia Gould, 1832 Tioga Street, Philadelphia, Pa.
1894. Wayland, Charles A., Porter Building, San Jose, Cal.
1882. Weaver, Chandler, Fox Chase P. O., Philadelphia, Pa.
1899. Weaver, Harry Sands, 1621 Chestnut Street, Philadelphia, Pa.
1900. Weaver, Willis P., 320 Radcliffe Street, Bristol, Pa.
1901. Webb, William B., Beaver Dam, Wis.
1903. Webster, Edgar M., 9139 Commercial Avenue, Chicago, Ill.
1900. Webster, Frank, 700 Reibold Building, Dayton, Ohio.
1881. Webster, Frank P., 316 Freemason Street, Norfolk, Va.
1899. Webster, George C., 305 West 7th Street, Chester, Pa.
1893. Webster, Samuel C., 99 High Street, Westerly, R. I.
1902. Welch, Charles Edgar, 12 West Columbus Street, Nelsonville, Ohio.
1888. Welch, George Oakes, Fergus Falls, Minn.
1891. Weirick, Clement A., 100 State Street, Chicago, Ill.
1902. Welliver, James Everson, 111 North Jefferson Street, Dayton, Ohio.
1902. Wells, Levy C., 719 Wheeling Avenue, Cambridge, Ohio.
1899. Wells, David W., "The Westminster," Copley Square, Boston, Mass.
1896. Wells, George S., 1407 Chapline Street, Wheeling, W. Va.
1900. Wentworth, Caroline Y., 57 Lincoln Street, Newton Highlands, Mass.
1897. Wessel, Peter H., 517 15th Street, Moline, Ill.
1859. WESSELHOEFT, CONRAD, 661 Boylston Street, Boston, Mass.
1867. WESSELHOEFT, WALTER, 26 Garden Street, Cambridge, Mass.
1894. Wesselhoeft, William Fessenden, 851 Boylston Street, Boston, Mass.
1859. WESSELHOEFT, WILLIAM P., 176 Commonwealth Avenue, Boston, Mass.
1858. WEST, EDWIN, No. 6 North Walnut Street, East Orange, N. J.
1901. West, Isaac C., 350 Elm Street, Dallas, Texas.
1901. Westfall, Floyd Edward, East Orange Street, Ann Arbor, Mich.
1901. Weston, Isabel G., Washington Street, Wellesley, Mass.
1866. WETMORE, JOHN MCE., 43 West 54th Street, New York, N. Y.
1900. Whaley, C. Bryant, 452 West Broad Street, Savannah, Ga.
1898. Wherry, Curtis A., Stapner Block, Ogden, Utah.
1882. Whipple, Alfred A., 639 Maine Street, Quincy, Ill.
1899. Whitaker, Eugene E., Newport, Vt.
1902. Whitaker, Harry O., South Charleston, Ohio.
1901. White, Benjamin R., Honeoye Falls, N. Y.
1897. White, A. Grace, 87 Main Street, Bradford, Pa.
1902. White, Florence R. Smith, Cardington, Ohio.
1901. White, John C., Port Chester, N. Y.
1893. White, John T., 28 State Street, Salt Lake City, Utah.
1887. White, Roland T., 914 Western Avenue, Allegheny, Pa.
1893. White, William Seymour, 900 Marshall Field Bldg., Chicago, Ill.
1902. Whitehead, J. H., 43 Church Street, Bowling Green, Ohio.
1888. Whiting, Walter B., Malden, Mass.
1890. Whitman, Frank S., Elgin, Ill.
1888. Whitmarsh, Henry A., 62 Jackson Street, Providence, R. I.
1896. Wiggers, Henry H., 529 Everett Street, Cincinnati, Ohio.
1903. Wiggin, Henry Mayhew, Main Street, Whitefield, N. H.
1902. Wiggins, C. C., Osage, Iowa.
1901. Wiggins, Theo. C., 12 Veronia Place, Brooklyn, N. Y.
1881. Wilberton, Lawrence G., Winona, Minn.
1891. Wilbur, Bertrand K., The Indian Training School, Sitka, Alaska.
1883. Wilcox, De Witt G., 597 Elmwood Avenue, Buffalo, N. Y.

1903. Wilcox, Franklin S., West Newton, Mass.
1886. Wilcox, Sidney Freeman, 51 West 52d Street, New York, N. Y.
1897. Wilder, Carlton V., 4 West 5th Street, Atlantic, Iowa.
1855. WILDER, LOUIS DE V., 55 West 33d Street, New York, N. Y.
1891. Wiley, Rebecca W., 160 Main Street, Laconia, N. H.
1886. Wilkins, George H., 306 Walnut Street, Newtonville, Mass.
1902. Wilkins, Geo. R., 568 West Madison Avenue, Cleveland, Ohio.
1902. Wilkinson, Chas. H., 423 Macon Avenue, Canon City, Col.
1900. Willard, Harry Stearns, 102 Washington Street, Paterson, N. J.
1867. WILLARD, LEWIS H., 236 Western Avenue, Allegheny, Pa.
1896. Willard, Mary A., 156 Warren Avenue, West, Detroit, Mich.
1901. Willcox, George W., Eaton Street, Hamilton, N. Y.
1895. Williams, Carl A., 24 Washington Street, New London, Conn.
1901. Williams, Clarence Mason, Alpena, Mich.
1903. Williams, Dudley Abeel, Dighton, Mass.
1900. Williams, E. C., 76 Main Street, Hot Springs, Va.
1893. Williams, Frank Fay, 6 Goodrich Street, Canton, N. Y.
1891. Williams, Franklin E., 8 West Main Street, Haddonfield, N. J.
1898. Williams, Margaret Cowen, 2909 Portland Avenue, Louisville, Ky.
1892. Williams, Perry C., Texarkana, Texas.
1903. Williams, Ruby May, 26 Chapel Street, Hartford, Conn.
1876. WILLIAMSON, ALONZO P., Pillsbury Bldg., Minneapolis, Minn.
1900. Williamson, Bemsley, Friendship, N. Y.
1872. WILLIAMSON, MATTHEW S., 1311 Arch Street, Philadelphia, Pa.
1903. Willis, John Embert, High Street, Somersworth, N. H.
1902. Wilson, Chas A., 313 Houston Street, San Antonio, Texas.
1902. Wilson, John E., 23 East 45th Street, New York, N. Y.
1876. WILSON, JOSEPH H., Bellefontaine, Ohio.
1873. WILSON, MATTHEW T., 1666 Fall Street, San Francisco, Cal.
1901. Wilson, William Henry, 3129 Rhodes Avenue, Chicago, Ill.
1865. WILSON, THOMAS P., 74 Forest Street, Detroit, Mich.
1901. Wilson, William, 121 Bates Street, Akron, Ohio.
1892. Winchell, Walter B., 137 Berkley Place, Brooklyn, N. Y.
1903. Windsor, Sarah Sweet, 138 Marlboro Street, Boston, Mass.
1902. Winnard, Wellington Leroy, 422 Main Street, Warsaw, Ill.
1899. Winslow, Thomas Hartley, San Louis Obispo, Cal.
1901. Wintsch, Carl Herman, 271 Fairmount Avenue, Newark, N. J.
1896. Wise, Julius C., 14 West 12th Street, Kansas City, Mo.
1895. Wisner, Jacob Ward, 315 North Paca Street, Baltimore, Md.
1899. Wiswall, Edward H., Washington Street, Wellesley, Mass.
1903. Witherbee, Lucy Emma, 2 King Street, Worcester, Mass.
1886. Wolcott, Edwin H., 57 South Union Street, Rochester, N. Y.
1902. Wollam, J. Frank, Jerry, Ohio.
1903. Wood, Arthur U., 483 Elmwood Avenue, Providence, R. I.
1901. Wood, Fred Webster, 3901 Cottage Grove Avenue, Chicago, Ill.
1886. Wood, James C., Rose Building, Cleveland, Ohio.
1895. Wood, Nelson Mervin, 72 High Street, Charlestown, Mass.
1860. WOOD, ORLANDO S., 521 N. Y. L. Building, Omaha, Neb.
1898. Woodbury, Ernest I., 212 North 4th Street, Burlington, Iowa.
1870. WOODBURY, WILLIAM H., Washington and State Streets, Chicago, Ill.
1901. Woodman, Robert C., State Homœopathic Hospital, Middletown, N. Y.
1892. Woodruff, Caroline P. Brooks, Independence, Iowa.
1896. Woodruff, William L., Troy, Pinal Co., Ariz.
1903. Woods, Frank A., 255 High Street, Holyoke, Mass.
1869. WOODWARD, ALVIN M., 128 West 13th Street, New York, N. Y.
1891. Woodward, George D., 211 Broadway, Camden, N. J.
1899. Woodward, Herbert B., La Grange, Ill.
1895. Worcester, Frank D., Keene, N. H.
1888. Worcester, George W., Newburyport, Mass.
1895. Worcester, John Fonerden, 405 Washington Street, Dorchester, Mass.
1872. WORCESTER, SAMUEL, 597 Congress Street, Portland, Me.
1902. Worth, Sidney, 606 Sutter Street, San Francisco, Cal.
1891. Wright, George H., Forest Glen, Md.

1881. Wrisley, John A., Lakeport, N. H.
1902. Wurtz, Charles B., 2431 North 5th Street, Philadelphia, Pa.
1889. Wuffle, Wilella Howe, 702 Bush Street, Santa Ana, Cal.
1881. Wyman, Edmond L., Manchester Centre, Vt.

1900. Yale, Arthur Wells, 1901 Park Avenue, Philadelphia, Pa.
1881. Yoder, Daniel, Catasauqua, Pa.
1902. Young, Albert D., Panama, N. Y.
1892. Young, E. Weldon, 1023 Columbia Street, Seattle, Wash.
1902. Young, Geo., Alexander, Nebraska Hospital for Insane, Hospital, Neb.
1902. Young, Jas. W., Bellefontaine, Ohio.
1902. Young, Willis Brock, 2344 Park Avenue, St. Louis, Mo.
1886. Youngman, Maurice D., 1618 Pacific Avenue, Atlantic City, N. J.

1902. Zbinden, Christian, 431 Nebraska Avenue, Toledo, Ohio.
1898. Ziegenfus, A. Frank, 1124 Wallace Street, Philadelphia, Pa.
1902. Zwetsch, John D., Main Street, Gowanda, N. Y.

CORRESPONDING MEMBERS.

1873. Tommaso Cigliano, M.D., Nables, Italy.
1876. W. Albert Haupt, M.D., Chemnitz, Saxony, Germany.
1876. John W. Hayward, M.D., 61 Shrewsbury Road, Birkenhead, Cheshire, England.
1876. Arthur C. Clifton, M.D., 9 Park Parade, Northampton, England.
1876. Thomas Skinner, M.D., 6 York Place, London, W., England.
1879. Alfred C. Pope, M.D., Monkton, Ramsgate, England.
1882. A. Claude, M.D., 43 Rue de Caumartin, Paris, France.
1885. Edward Blake, M.D., 65 Seymour Street, Hyde Park, W., England.
1889. Mohendra Lal Sircar, M.D., Calcutta, India.
1889. B. N. Banerjee, M.D., 34½ Beadon Street, Calcutta, India.
1891. Alexander Villiers, M.D., Dresden, Saxony, Germany.
1891. D. Dyce Brown, M.D., 29 Seymour Street, Portman Square, London, W., England.
1891. Leopold Salzer, M.D., 6 Loudon Street, Calcutta, India.
1892. Frederick Delosea, M.D., Frankfort, Germany.
1892. August Grunewald, M.D., Frankfort, Germany.
1893. Alfred E. Hawkes, M.D., Liverpool, England.
1893. J. Cavendish Molson, M.D., 10 Walsingham Terrace, West Brighton, England.
1893. Oscar Hansen, M.D., Copenhagen, Denmark.
1893. P. C. Majundar, M.D., Calcutta, India.
1893. E. Vernon, M.D., Toronto, Ontario.
1895. U. C. Bagchi, M.D., Calcutta, India.
1895. C. S. Kali, M.D., L.M.S., Calcutta, India.
1897. Franz Edwein, M.D., Mainz, Germany.
1897. E. Mersch, M.D., Brussels, Belgium.
1897. Ernest Nyssers, M.D.
1902. E. Monterde, City of Mexico, Mexico.
1903. Magalhaes Castro, M. D., San Paulo, Brazil.

HONORARY MEMBERS

1876. P. Jousset, M.D., Paris, France.
1876. R. E. Dudgeon, M.D., 22 Carlton Hill, London, W., England.

HONORARY ASSOCIATE MEMBERS

1879. Mrs. Elizabeth Thompson, New York, N. Y.
1883. Prof. N. B. Wood, Cleveland, Ohio.
1893. Madame Olga Bojanus, Samara, Russia.
1899. E. H. S. Bailey, Lawrence, Kan.

LIST OF MEMBERS, CLASSIFIED BY STATES

ALABAMA

BIRMINGHAM, Jefferson County.
Ballard, Asa N., M.D., 2020 Third Avenue.
CALHOUN.
Phelps, Edith M., M.D.
CITRONELLE.
Duffield, Alfred M., M.D.
MOBILE, Mobile County.
Lyon, George Gaines, M.D., Pollock Building.

ALASKA

PORT BARROW.
Marsh, Horatio Richmond, M.D.
SITKA.
Wilbur, Bertrand K., M.D.

ARIZONA

PHOENIX, Maricopa County.
Hawley, Amasa, Sr., M.D.
Thomas, John Wix, M.D.
TROY, Pinal County.
Woodruff, Wm. L., M.D.

ARKANSAS

DEVALL BLUFF, Prairie County.
Mason, Stephen R., M.D.
EUREKA SPRINGS, Carroll County.
Regan, Milton R., M.D.
HOT SPRINGS, Garland County.
Biggs, Elmer L., 26 Central Avenue.
Dake, Charles, M.D.
Dake, Frank B., M.D.
Dimon, Robt. B.
Forbes, Wm. O., 242 Central Avenue.
Hallman, Victor H., M.D., Arkansas National Bank Building.
Short, Zuber Nathaniel, M.D., 428 Central Avenue.
LITTLE ROCK, Pulaski County.
Green, Wm. E., M.D., 202 Center Street.

AUSTRALIA

MELBOURNE.
Ray, Wm. R., M.D., 26 Collins Street.

CALIFORNIA

ARLINGTON, Riverside County.
Robertson, Herbert M., M.D.
BAKERSFIELD, Kern County.
Congdon, Adeline B. Dake, M.D.
Dake, Adeline B. Crowley, M.D.
LONG BEACH.
Chaffee, John D., M.D., 420 Cedar Avenue.
LOS ANGELES, Los Angeles County.
Bishop, Herbert M., M.D., 2627 Hoover Street.
Buell, Edwin Charles, 449 So. Hill.
Campbell, Eugene, M.D., 315 South Broadway.
Hawpes, Wm. J., M.D., 315 South Broadway.

CALIFORNIA—Continued

Kirkpatrick, John C., M.D., 328 West Third Street.
Laird, F. F., M.D., 315 South Broadway.
Salisbury, Samuel Scott, M.D., Bradbury Building.
Van Norman, Edgar Vincent, M.D., 545 South Broadway.

MONROVIA, Los Angeles County.
Chamberlain, Myron H., M.D.

OAKLAND, Alameda County.
Chamberlain, Nelson Hoyt, M.D., Macdonough Building.
Crawford, A. K., 1066 Twelfth Street.
Fenton, Susan J., M.D., 672 Fourteenth Street.
Hill, Robert L., M.D., 564 Fourteenth Street.
Small, Charles Kendall, M.D.
Stirk, J. C., P. O. Box 591.

ONTARIO, San Bernardino County.
Campbell, Robert Alexander, M.D.

PASADENA, Los Angeles County.
Beach, Eliza J., 50 Worcester Avenue.
Dake, Benj. F., M.D.
Evans, Albert J., 155 Marengo Avenue.
Macomber, Henry Kirke, M.D.

PATTON, San Bernardino County.
Campbell, Merritt B., M.D.
Dolan, A. Stanley, M.D.

RIVERSIDE, San Bernardino County.
Johnson, Robert B., M.D.

SACRAMENTO, Sacramento Coounty.
Pinkham, Chas. B., M.D., 627 J Street.
Raver, Carl Frost, M.D., 806½ J Street.
Watts, Pliny R., M.D., 1010 Eighth Street.

SAN DIEGO, San Diego County.
Arndt, Hugo R., M.D., 951 60th Street.
Averall, Maria Brown, M.D., 3145 G Street.
Lewis, J. Perry, M.D., 28th Street and National Avenue.

SAN FRANCISCO, San Francisco County.
Arndt, H. R., 372 Sutter Street.
Ballard, J. Stow, M.D., 610 Hyde Street.
Boericke, Wm., M.D., 1812 Washington Street.
Bryant, Edgar Reeve, M.D., 406 Sutter Street.
Cameron, Ida B., M.D., 2653 Howard Street.
Canney, Frederick G., M.D., 606 Sutter Street.
Currier, Christopher B., M.D., 91½ Geary Street.
Goss, Alice Morgan, M.D., 606 Sutter Street.
Hoyle, Ethelbert Petrie, M.D., 121 Geary Street.
Hurd, Laura B., M.D., 1301 Guerrero Street.
Martin, Eleanor Frances, M.D., 606 Sutter Street.
Martin, George Henry, M.D., 606 Sutter Street.
Minaker, Andrew J., 291 Valencia Street.
McConkey, Thomas Graham, 406 Sutter Street.
Palmer, George Henry, M.D., 606 Sutter Street.
Peterson, Alfred C., M.D., 135 Geary Street.
Stratton, Wallace C., M.D., 2255 Mission Street.
Ward, Florence N., M.D., 606 Sutter Street.
Ward, James W., M.D., 606 Sutter Street.
Worth, Sidney, 606 Sutter Street.
Wilson, Matthew T., M.D., 166 Fell Street.

SAN JOSE, Santa Clara County.
Keith, William E., M.D., Porter Building.
Tenney, Lilla M., M.D., 331 South Third Street.
Wayland, Charles A., M.D., Porter Building.

SAN LUIS OBISPO, San Luis Obispo County.
Winslow, Thomas Hartley, M.D.

CALIFORNIA—Continued

SANTA ANA, Orange County.
Howe, Willella, M.D., 702 Bush Street.
SANTA BARBARA, Santa Barbara County.
Hatch, Philo L., M.D., 221 Figueroa Street.
Stambach, Ida V., M.D., 1509 State Street.
SANTA CRUZ, Santa Cruz County.
Bennett, Ruth Parker, M.D., Lincoln and Pacific Avenues.
SANTA MONICA, Los Angeles County.
Hunt, John S., M.D.
VALLEJO.
Lain, Ruchel B., M.D., 821 Marin Street.

CANADA

HAMILTON.
Bates, Frank D. W., M.D., 34 James Street, North.
MONTREAL.
Fisher, Arthur, M.D., Sherbrooke Street.
Griffith, Alex. Randall, M.D., 535 Wellington Street.
Patton, Arthur Douglas, M.D., 58 Crescent.
Patton, Charles James, M.D., 990 Sherbrooke Street.
Patton, Hugh Mathewson, M.D., 992 Sherbrooke Street.
SHERBROOKE, P. Q.
Spencer, Havelton, M.D., 31 Commercial Street.
TORONTO.
Anderson, Jeremiah N., M.D., 5 College Street.
WINNIPEG.
Clark, Charles F., M.D., 21 Princess Street.
Prentis, Percy L., U. S. Immigration Office.

CHILI, SOUTH AMERICA

IQUIQUE.
Hoover, Willis C., M.D.

COLORADO

CANON CITY, Fremont County.
Wilkinson, Chas. H., 423 Macon Avenue.
COLORADO SPRINGS, El Paso County.
Beeler, Margaret Hoper, M.D., 1229 North Tejon Street.
Faust, Frederick A., 21 E. Platt Avenue.
Lawrence, George W., M.D., 5 N. Tejon Street.
Sharetts, Upton A., M.D., 1327 N. Nevada Avenue.
Stough, Charles Francis, 122 E. Kiowa.
DENVER, Arapahoe County.
Anderson, John Wylie, M.D., Steele Block.
Burnham, Norman G., M.D., 708 Fourteenth Street.
Burr, William Alton, M.D., 2010 Welton Street.
Cooke, Persifor Marsden, M.D., 1290 Race Street.
Harris, John W., M.D., 613 Seventeenth Street.
Irvine, Joseph Clinton, M.D., Steele Block.
King, Edward H., M.D., 729 Sixteenth Street.
Kinley, Joseph B., M.D., 1401 Welton Street.
Mastin, James William, M.D., 25 18th Street.
Peck, Grant S., M.D., 1427 Stout Street.
Rooseveldt, G. F., M.D., 2 Steele Block.
Smyth, Samuel Scales, M.D., California and Seventeenth Streets.
Strickler, David A., M.D., 705 Fourteenth Street.
Tennant, Chauncey E., M.D., 16 Steele Block.
Vinyard, Guy Stewart, 1517 Welton Street.
Walker, James M., M.D., 1257 Broadway.
EVANS, Weld County.
Horton, Daniel J., M.D.
FLORENCE, Fremont County.
Brooks, William F., M.D.

COLORADO—Continued

GOLDEN.
King, Walter Joel, M.D.
LONGMONT.
Billings, Robt. A.
LOVELAND.
Cramer, N. A.
OPHIR, San Miguel County.
Compton, George William, M.D.
PUEBLO, Pueblo County.
Tucker, Genevieve, M.D.
Walter, Ziba D., M.D., 107 West Seventh Street.

CONNECTICUT

BIRMINGHAM, New Haven County.
Phillips, Albert William, M.D.
BRIDGEPORT, Fairfield County.
Beebe, Wm. B., M.D., 197 Fairfield Avenue.
Gregory, Edward P., M.D., Lafayette, near State Street.
Payne, Clarence Niles, M.D., 385 State Street.
Sanford, Charles E., M.D.
DANBURY, Fairfield County.
Penfield, Sophia, M.D.
DEEP RIVER, Middlesex County.
Devitt, Frederick Wm., M.D.
GREENWICH, Fairfield County.
Piatti, Virgil C., M.D.
HARTFORD, Hartford County.
Angell, Augustus, M.D., 904 Main Street.
Case, Erastus E., M.D., 902 Main Street.
Cole, Harlan Page, M.D., 135 Sigourney Street.
Hooker, Edward Beecher, M.D., 721 Main Street.
Russegue, Henry E., M.D., 93 Farmington Avenue.
Shannon, Elmer Ellsworth, M.D.
Williams, Ruby M., 26 Chapel Street.
IVORYTON, Middlesex County.
Shannon, Elmer Ellsworth, M.D.
MILFORD, New Haven County.
Putney, Willis S., M.D., Broad Street.
MYSTIC, New London County.
Barber, Oscar M., M.D.
NEW BRITAIN, Hartford County.
Peck, Fred. W., M.D., 42 Park Place.
Styles, Elmer L., M.D.
NEW CANAAN, Fairfield County.
Keeler, Charles B., M.D.
NEW HAVEN, New Haven County.
Cheney, Benjamin H., M.D., 45 Elm Street.
Sage, Henry P., M.D., 48 Howe Street.
Sage, William H., M.D., 48 Howe Street.
Vishno, Charles, M.D., 361 Orange Street.
NEW LONDON, New London County.
Allen, Albion H., M.D.
Shipman, L. K., 41 Huntington Street.
Williams, Carl A., M.D., 24 Washington Street.
NORWALK, Fairfield County.
Hitchcock, Dexter, M.D.
NORWICH, New London County.
Linnell, Edward H., M.D.
Stark, Clinton E., M.D.
RIDGEFIELD.
Shelton, Geo. G.

CONNECTICUT—Continued

SOUTH NORWALK, Fairfield County.
Pardee, Emily V. D., M.D.
STAMFORD, Fairfield County.
Givens, Amos J., M.D., Stamford Hall.
Mann, Anna R.
SOUTHINGTON.
Sawtelle, Benjamin A., M.D.
STAFFORD SPRINGS.
Burd, Geo. P., M.D.
Pfeiffer, Harry Shriner, M.D.
Shirk, Samuel Martin, M.D., 35 Sumner Street.
Pulver, Frank Augustus, 88 Water Street.
Root, Stella A., 349 Atlantic Street.
WILLIMANTIC, Windham County.
Colgrove, Charles H., M.D.

DELAWARE

FREDERICA, Kent County.
Hoey, William F., M.D.
Hughes, Chas. Wilson, M.D., 1407 W. Eighth Street.
WILMINGTON, New Castle County.
Kittenger, Leonard Armour, M.D., 411 Delaware Avenue.

DISTRICT OF COLUMBIA

WASHINGTON.
Babbitt, Zeno B., M.D., 12 Iowa Circle, N.W.
Branson, Joseph Holmes, M.D., 1231 New Jersey Avenue, N.W.
Brosuius, Mary Alice, M.D., 1101 K Street, N.W.
Burritt, Alice, M.D., 1129 Fourteenth Street, N.W.
Burritt, Martha Clark, M.D., 313 Fifth Street, S.E.
Choate, Rufus, M.D., 3267 O Street, N.W.
Corey, Waterman F., M.D., 1305 R Street, N.W.
Critchton, Macpherson, M.D., 1229 H Street, N.W.
Custis, George W. N., M.D., 112 East Capitol Street.
Custis, J. B. Gregg, M.D., 912 Fifteenth Street, N.W.
Custis, Marvin A., M.D., 626 East Capitol Street.
Davis, Charles A., M.D., 1010 Fifteenth Street, N.W.
Day, George F., M.D., 1405 Rhode Island Avenue.
Dennison, Ira Warren, M.D., 1312 L Street, N.W.
Emery, William Gorden, M.D., 1324 L Street, N. W.
Freer, James A., M.D., 1523 I Street, N.W.
Gilbert, Charles B., M.D., 1444 Rhode Island Avenue.
Green, Julia M., M.D., 1738 N Street, N.W.
Hawxhurst, Howard H., M.D., 1333 L Street, N.W.
Hislop, Margaret, M.D., 1630 Fourteenth Street, N.W.
Jenkins, Ralph, M.D., 1732 Massachusetts Avenue, N.W.
King, William R., M.D., 1422 K Street, N.W.
Kingsman, Richard, M.D., 711 East Capitol Street.
Krogsted, Henry, M.D., 1524 K Street, N.W.
Lee, George Hyde, M.D., 1620 Fifteenth Street, N.W.
Lothrop, Edwin S., M.D., 807 East Capitol Street.
MacDonald, T. L., M.D., 1402 Massachusetts Avenue, N.W.
Moffit, Melvin M., M.D., 127 B Street, S.E.
O'Brien, Emile Young, M.D., 2504 19th Street, N.W.
Rauterberg, Arthur C., M.D., 510 Fifth Street, N.W.
Riggs, Daniel H., M.D., 1010 Eleventh Street, N.W.
Sharp, John R. Homœopathic Hospital.
Sherman, Nancy B., M.D., 700 Massachusetts Avenue, N.E.
Sommer, Henry Otto, M.D., 1227 O Street, N.W.
Stearns, John S., M.D., 1425 Rhode Island Avenue, N.W.
Stearns, Solomon S., M.D., 1425 Rhode Island Avenue, N.W.
Swartwout, Frank A., M.D., 810 Eleventh Street, N.W.

DISTRICT OF COLUMBIA—Continued

Swormstedt, Lyman B., M.D., 1455 Fourteenth Street, N.W.
Taylor, Alfred H., M.D., 485 H Street, S.W.
TAKOMA PARK, D. C.
Robinson, Samuel A., M.D.

FLORIDA

DEFUNIAK SPRINGS.
Skiles, T. W., M.D.
JACKSONVILLE, Duval County.
Johnson, Charles Ward, 33 E. Monroe.
Stout, Henry R., M.D.
MIAMI, Dade County.
Graham, Walter S., M.D.
TAMPA, Hillsboro County.
Bruce, Orpha D. B., M.D., 1302 Florida Avenue.
Richardson, Wm. C., 115 Hyde Park Avenue.

GEORGIA

ATLANTA, Fulton County.
Hicks, Susan M., M.D., "The Grand."
Lawshé, John Z., M.D., 150 W. Peachtree Street.
Lukens, Merriken B., M.D., 159 Loyd Street.
Morse, Lucas Daniel, M.D., P. O. Box 584.
Orma, Francis Hodgson, M.D., 70 N. Forsythe Street.
Paine, Clarence M., M.D., 69 N. Forsythe Street.
SAVANNAH, Chatham County.
Whaley, Bryant C., M.D., 542 W. Broad Street.
WEST SAVANNAH.
Hanna, Lucy Shepard, M.D., 109 Bolton Street.

GERMANY

HAMBURG.
Pitcairn, Hugh, M.D.
STUTTGART.
Haehl, Richard, M.D.

ILLINOIS

ATKINSON, Henry County.
Howlett, George Cleveland, M.D.
AURORA, Kane County.
Colwell, Charles Estabrook, M.D., 23 S. Lake Street.
McBurney, Benj. A., 200 South Park Avenue.
BATAVIA, Kane County.
Spencer, Annie Whitney, M.D.
BELLEVILLE, St. Clair County.
Loelkes, George, M.D., 202 South Jackson Street.
BELVIDERE, Boone County.
Swift, Arthur Wesley, M.D., 501 State Street.
BLOOMINGTON, McLean County.
Neiberger, William Emory, M. D., 402 W. Jackson Street.
CANTON, Fulton County.
Clemens, Frank L., M.D., 223 West Chestnut Street.
CASEY, Clark County.
Phelps, Chas. R., M.D., Jasper Avenue.
CENTRALIA, Marion County.
Dunn, Charles N., M.D., 300 E. Broadway.
CHICAGO, Cook County.
Allen, Henry C., M.D., 5142 Washington Avenue.
Aurand, Samuel Herbert, M.D., 720 Washington Boulevard.
Bailey, Edward Stillman, M.D., 3034 Michigan Avenue.
Barker, Clarence F., M.D., Ellis Avenue and Oakwood Boulevard.
Bell, James S., M.D., 2200 Congress Street.

ILLINOIS—Continued

Blackwood, Alexander L., M.D., 9151 Commercial Avenue.
Blouke, Milton Baker, M.D., 1222 West Washington Street.
Breyfogle, William L., M.D.
Buffum, Joseph Howard, M.D., 34 Washington Street.
Chislett, Howard Roy, M.D., 3130 Prairie Avenue.
Clapp, Katherine B., M.D., 6222 Woodlawn Avenue.
Clark, Dwight Freeman, M.D., Cook County Hospital.
Cobb, Joseph P., M.D., 254 East Forty-seventh Street.
Collins, Clinton DeWitt, M.D., 92 State Street.
Conklin, Winfield Edwin, 2814 Groveland Avenue.
Costain, Thomas E., M.D., 100 State Street.
Cowperthwaite, Allen C., M.D., 31 Washington Street.
Day, L. A. L., M.D., 55 State Street.
Delamater, Nicholas B., M.D., 31 Washington Street.
Duffield, Alice Virginia, M.D., 100 State Street.
Duncan, Francis, M.D., 100 State Street.
Evans, C. H., M.D., 739 N. Hoyne Avenue.
Everett, Frederick, M.D., 420 Centre Street.
Fellows, C. Gurnee, M.D., 70 State Street.
Fisher, Charles E., 103 State Street.
Fitz-Patrick, Guilbert, M.D., 100 State Street.
Flint, Nellie C., M.D., 749 Marshall Field Boulevard.
Foster, Richard N., M.D., 553 Jackson Boulevard.
French, M. R., 44 Madison Street.
Fuller, Charles, M.D., 100 State Street.
Gatchell, Charles, M.D., 100 State Street.
George, Edgar J., M.D., 31 Washington Street.
Gilman, J. E., M.D., Hotel Metropole.
Gordon, Arthur H., M.D., 268 La Salle Avenue.
Graves, Kate T., M.D., 5663 Washington Avenue.
Gross, James Eldridge, M.D., 222 Schiller Street.
Grosvenor, Lemuel C., M.D., 185 Lincoln Avenue.
Gwynne, Evan E., M.D., 556 Garfield Avenue.
Halbert, Homer V., M.D., 70 State Street.
Hedges, Albert P., M.D., 395 Evanston Avenue.
Hedges, Samuel P., M.D., 1520 Edgecomb Place.
Hetherington, Judson Egbert, M.D., 1035 Warren Avenue.
Hill, George Mortimer, M.D., 4700 Grand Boulevard.
Hobart, Austin Walter, M.D., 118 Ashland Boulevard.
Hobson, Sarah Matilda, M.D., 5400 Madison Avenue.
Honberger, Frank Henry, M.D., 360 Oakwood Boulevard.
Hood, C. Todd, M.D., 992 W. Adams Street.
Howe, W. D., 75 N. Clinton Street.
Jones, Mary H., M.D., Hyde Park.
Kahlke, Charles E., M.D., 3034 Michigan Avenue.
Karst, F. August, M.D., 636 Sedgwick Street.
King, J. B. S., M.D., 6713 Wentworth Avenue.
Kippax, John R., M.D., 4665 Indiana Avenue.
Leavitt, Sheldon, M.D., 148 Thirty-seventh Street.
Leipold, William Charles, M.D., 3702 Cottage Grove Avenue.
Low, Joseph Hooker, M.D., 2458 Indiana Avenue.
Lowenthal, Louis, M.D., 1405 W. 103d Street.
MacCracken, William P., M.D., 4327 Greenwood Avenue.
Martin, Chas. Velas, 2814 Groveland Avenue.
McBean, George Martin, M.D., 3326 Mt. Vernon Street.
McCauley, E. S. H.
McGibbon, W. P., Fifty-third and Jefferson Avenue.
McKinney, Samuel P., M.D., 979 Warren Avenue.
Metcalf, Frank A., M.D., 5246 Prairie Avenue.
Mitchell, Clifford, M.D., 70 State Street.
Newell, R. C., M.D., 70 State Street.

ILLINOIS—Continued

Payne, Hannah Jones, M.D.
Pierce, Oscar F., M.D., 846 W. Twenty-second Street.
Pratt, E. H., M.D., 100 State Street.
Richard, George E., M.D., 44½ Bellevue Place.
Roberts, Dwight J., M.D., 912 Venetian Building.
Rockwell, Cortlandt B., M.D., 5401 Madison Avenue.
Schneider, S. Newton, M.D., 236 Dearborn Avenue.
Sawyer, E. W., M.D., 1416 Masonic Temple.
Shears, George F., M.D., 3130 Indiana Avenue.
Skiles, Hugh P., M.D., 936 W. Monroe Street.
Smith, George T., M.D., 5504 State Street.
Smith, Julia Holmes, M.D., Reliance Building.
Stearns, William, M.D., 34 Washington Street.
Stenhouse, A. Amelia Goodrich, M.D., 7142 Emerald Avenue (Englewood).
Stephens, Chas. N., 1899 Milwaukee Avenue.
Storer, John, 1106, 92 State Street.
Streeter, John W., M.D., 2001 Prairie Avenue.
Swan, Charles J., M.D., 34 Washington Street.
Sweet, E. C., M.D., 70 State Street.
Taylor, Edwin A., M.D., 34 Washington Street.
Thomas, Arthur E., M.D., 100 State Street.
Thome, Arthur G., M.D., 133 Lincoln Avenue.
Thompson, Jay J., M.D., 707 Marshall Field Building.
Thompson, Mark M., M.D., 805 W. Monroe Street.
Turbin, Louis M., M.D., 103 Randolph Street.
Vilas, C. H., M.D., 2811 Cottage Grove Avenue.
Walls, Charles Bruce, M.D., 1003 Warren Avenue.
Waring, Guernsey P., M.D., 504 Stewart Building.
Webster, E. M., M.D., 9139 Commercial Avenue.
Weirick, Clement A., M.D., 100 State Street.
White, William Seymour, M.D., 900 Marshall Field Building.
Wilson, Wm. Henry, M.D., 3129 Rhodes Avenue.
Wood, Fred Webster, M.D., 3901 Cottage Grove Avenue.
Woodbury, William H., M.D., Washington and State Streets.

CLINTON, DeWitt County.
Borgardus, Charles S., M.D.
Porter, John Guernsey, M.D., 404 West Main.

CRETE, Will County.
Miessler, C. F., Otto, M.D.

DIXON, Lee County.
Blackman, Orville B., M.D.

DANVILLE.
Mize, H. E., M.D.

DUNDEE, Kane County.
Kerch, Harry E., M.D.

ELGIN, Kane County.
Whitman, Frank S., M.D.

EVANSTON, Cook County.
Bragdon, Merritt Caldwell, M.D., 1709 Chicago Avenue.
Hazeltine, Burton, M.D.
Hinkle, Abbie A. M., M.D., 1039 Maple Avenue.

GALESBURG, Knox County.
Chase, Maurice J., M.D.

GENESEO, Henry County.
Spencer, William Francis, M.D.

GENOA, De Kalb County.
Mordoff, Charles H., M.D.

HARVEY, Cook County.
Franklin, Wm. A., M.D.

HOOPESTON.
Adsit, J. S., M.D.

ILLINOIS—Continued

JACKSONVILLE, Morgan County.
Halsted, Milton A., M.D.

JOLIET, Will County.
Abell, E. J., M.D., 101 South Center Street.
Beckwith, Henry M., M.D., 304 Banker Building.
Bergman, Nils, 1201 Cass Street.
Davis, O. C., M.D., 323 Jeff Street.
Foote, William Kellogg, M.D., 306 Osgood Street.
Houston, Grant, M.D., 201 North Chicago Street.

LA GRANGE, Cook County.
Llewellyn, Henry S., M.D., Fifth and Harris Avenues.
Woodward, Herbert B., M.D.

LA SALLA, La Salle County.
Coutant, George F., M.D.

LERNA, Coles County.
Leitch, Robert Newton, M.D.

LOCKPORT, Will County.
Courtney, John F., M.D., 916 Hamilton Street.

MARSEILLES, La Salle County.
Patton, William Mathewson, M.D.

MOLINE, Rock Island County.
Arp, August H., M.D.
Wessel, Peter H., M.D., 517 Fifteenth Street.

MORGAN PARK.
Smith, Wilson A., 11109 Fairfield Avenue.

MORRIS, Grundy County.
Sturtevant, Myron C., M.D.

MOUNT PULASKI, Logan County.
Poppele, Charles F., M.D.

OAK PARK, Cook County.
Hendy, Clara A., M.D.

OTTAWA, La Salle County.
Bascom, Henry M., M.D., 728 Columbus Street.

PARIS, Edgar County.
Hunt, George H., M.D.
Smith, Norman Pitt, M.D., 255 West Court Street.

PONTIAC, Livingstone County.
Long, Charles H., M.D., Sterry Block.

QUINCY, Adams County.
Whipple, Alfred A., M.D., 639 Main Street.

RIVERSIDE.
Rich, Fred W., M. D.

ROCHELLE, Ogle County.
Gould, William W., M.D.

ROCKFORD, Winnebago County.
James, Katherine E., M.D., 123 North Main Street.
Maas, Elizabeth C., M.D., 129 North Main Street.

ROCK ISLAND, Rock Island County.
Bradford, Eli, M.D., 632 Eighteenth Street.

SPRINGFIELD, Sangamon County.
Frazee, Calvin A., M.D., Illinois National Bank Building.

STERLING, Whiteside County.
Hill, Marion J., M.D., 507 Locust Avenue.
Winnard, Wellington Leroy, 422 Main.

WHEATON, Du Page County.
Owen, Charles S., M.D., 123 Main Street.

WOODSTOCK, McHenry County.
Primm, John W., M.D.

INDIANA

ANDERSON, Madison County.
Sears, Albert H., M.D., 139 West Ninth Street.
BERNE, Adams County.
Franz, Ernest, M.D.
ELKHART, Elkhart County.
Fisher, A. Leroy, M.D., 315 Pigeon Street.
EVANSVILLE, Vanderburg County.
Davis, Fielding L., M.D., 209 Locust Street.
Taylor, Theodore H., M.D.
FORT WAYNE, Allen County.
Bowen, George W., M.D., 232 East Washington Street.
GOSHEN, Elkhart County.
Kreider, Martin K., M.D.
GREENCASTLE, Putnam County.
Ayler, Amos E., M.D., 125 Washington Street.
INDIANAPOLIS, Marion County.
Adams, H. Alden, M.D., 21 West Ohio Street.
Compton, J. Augustine, M.D., 115 E. Ohio Street.
George, Rebecca Rogers, M.D., West Ohio and Meridian Streets.
George, William E. M.D., Ohio and Meridian streets.
Runnels, O. S., M.D., 203 North Meridian Street.
Runnels, Sollis, M.D., 38 East Ohio Street.
Stewart, Frank C.
Stewart, William R., 129 East Ohio Street.
LA PORTE, La Porte County.
Martin, H. H., M.D., 710 Jefferson Street.
Smith, Milton S., M.D.
LEBANON, Boone County, Michigan City.
Coone, H. N., M.D., 404 East Pearl Street.
Martin, Francis V., M.D., 808 Franklin Street.
LAFAYETTE.
Kern, C. B., M.D., 610 Columbia Street.
MICHIGAN CITY, Clinton County.
Rogers, Jesse Belmont, M.D., 118 East Sixth Street.
MUNCIE, Delaware County.
Baker, Harry H., M.D., 710 East Main Street.
NASHVILLE, Brown County.
Harrell, Madison H., M.D., 96 North Tenth Street.
NEW ALBANY, Floyd County.
Erni, G. Oscar, M.D., 809 East Spring Street.
NOBLESVILLE, Hamilton County.
Harrell, Samuel, M.D., North Tenth Street.
TERRE HAUTE, Vigo County.
Waters, Moses H., M.D., 126 North Seventh Street.
VALPARAISO, Porter County.
Ketchum, Frederick Grant, M.D., P. O. Building.

INDIAN TERRITORY

ARDMORE.
Peterman, Julius H., M.D.
OKMULGEE, Creek Nation.
Leslie, Samuel Brewster, M.D.

IOWA

ALBIA, Monroe County.
King, Sylvester M., M.D.
ATLANTIC, Cass County.
Macomber, A. P., M. D.
Morse, Bertrand, M.D.
Wilder, Carleton V., M.D., 4 West Fourth Street.
BOONE, Boone County.
Martin, George Albert, M.D.

IOWA—Continued

BURLINGTON, Des Moines County.
Woodbury, Ernest I., M.D., 212 North Fourth Street.
CEDAR FALLS, Blackhawk County.
Hansen, Andreas Schantz, M.D.
CEDAR RAPIDS, Linn County.
Cogswell, Charles H., 1011 Second Avenue.
CHARLES CITY.
Miner, Jas. B., M.D.
CLERMONT, Fayette County.
Becker, Frederick, M.D.
CLINTON, Clinton County.
Blunt, Arthur W., M.D., 323 Fifth Avenue.
COUNCIL BLUFFS, Pottawattamie County.
Hanchett, Alfred P., M.D., 120 Fourth Street.
Montgomery, Phineas J., M.D., 217 Fourth Street.
CRESTON, Union County.
Myers, Amos J., M.D.
DAVENPORT, Scott County.
Hoefle, Henry C., M.D., 314 Brady Street.
DES MOINES, Polk County.
Aldrich, Stewart W., Grand Avenue.
Busenbark, Lucy M., M.D.
Drake, Joseph H., M.D., 2201 Cottage Grove Avenue.
Eaton, Charles W., M.D., 420 Walnut Street.
Harbach, B. I., M.D., "The Iliad."
Linn, A. M., M.D., 605 Walnut Street.
Royal, George, M.D., 505 Walnut Street.
DUBUQUE, Dubuque County.
Bray, Nicholas, M.D., 1157 Iowa Avenue.
Jackson, Edward R., M.D., 855 Locust Street.
FORT DODGE, Webster County.
Miner, Herbert Smith, M.D., 909 Central Avenue.
GRUNDY CENTRE, Grundy County.
Burns, Judson D., M.D.
INDEPENDENCE, Buchanan County.
Woodruff, Caroline E. Brooks, M.D.
IOWA CITY, Johnson County.
Gilchrist, James Grant, M.D., 615 North Dubuque Street.
Hazard, Theodore Lincoln, M.D., 12 North Clinton Street.
KEOKUK, Lee County.
Bancroft, Walton, M.D.
Hoyt, Mary O., M.D., 26 North Fourth Street.
LAKE CITY, Calhoun County.
Humphrey, Howard M., M.D.
MADRID, Boone County.
Brown, E. C., M.D., Second and State Streets.
MAGNOLIA, Harrison County.
Cutler, Charles E., M.D.
MANCHESTER, Delaware County.
Dittmer, Ernest G., M.D.
Triem, Peter E., M.D., Main and Madison Streets.
MARION, Linn County.
Hindman, David R., M.D., 1901 Seventh Avenue.
Moorehead, James, M.D., 743 Twelfth Street.
MASON CITY, Cerro Gordo County.
Cogswell, Chas. H., Jr., M.D.
MOUNT PLEASANT, Henry County.
Linn, Ellis Gregg, M.D., 134 Minn Street.
ONAWA.
Page, C. V., M.D.

IOWA—Continued

OSAGE, Mitchell County.
Wiggins, C. C., M.D.
OSKALOOSA, Mahaska County.
Kemp, M. E., M.D.
Miller, Robert P., M.D., Evans Block.
POSTVILLE, Allamakee County.
Becker, Frederick J., M.D.
SIGOURNEY, Keokuk County.
Strawbridge, Frank A., M.D.
SIOUX CITY, Woodbury County.
Hanchett, John I., M.D.
Hermann, John, M.D., 701 Jackson Street.
Remington, Fred. A., M.D.
Spreng, T. F. H., M.D., Iowa Building.
WALL LAKE, Sac County.
Hayden, Arthur S., M.D.
WEBSTER CITY, Hamilton County.
Drake, Franklin Joseph, M.D.
WHITTIER, Linn County.
Ross, Alice Idella, M.D.

JAPAN

NAGASAKI.
Suganuma, Mary A., M.D.

KANSAS

ATCHISON, Atchison County.
Johnson, George, H. T., M.D.
CONCORDIA, Cloud County.
Raines, Taylor E., M.D., Sixth Street and Broadway.
KANSAS CITY, KAN.
Starcke, Andrew H., M.D. 609 Kansas Avenue.
KINGMAN, Kingman County.
Light, Jacob Wilbert, M.D.
LAWRENCE, Douglas County.
Gardner, Henry Seth, M.D., 823 Ken Street.
LINCOLN, Lincoln County.
Cole, Sarah A., M.D.
MARION, Marion County.
Barrows, George S., M.D.
PARSONS, Labette County.
Boardman, E. W., M.D., 115 Central Avenue.
PITTSBURG, Crawford County.
Canfield, Corresta T., M.D., 513 North Broadway.
SUMMERFIELD, Marshall County.
Matchett, John, M.D.
TOPEKA, Shawnee County.
Menninger, Charles Frederick, M.D., 727 Kansas Avenue.
WASHINGTON, Washington County.
Gillstrap, H. Preston, M.D.

KENTUCKY

BOWLING GREEN, Warren County.
Brown, Grace, M.D., Corner Eighth and State Streets.
Millsop, Sarah J., M.D.
CARLISLE, Nicholas County.
Dills, Malcolm, M.D.
COVINGTON, Kenton County.
Reilly, William F., M.D., 1030 Madison Avenue.
FLEMINGTON.
Phillips, William O., M.D.

KENTUCKY—Continued

GEORGETOWN, Scott County.
Thomasson, John C., M.D., 214 Main Street.
LEXINGTON, Fayette County.
Johns, Emory B., M.D., 24 East Second Street.
Kehoe, Henry C., M.D., 263 South Lime Street.
Smith, Orrin T., 164 North Upper Street.
Washburne, Julia, M.D., 294 North Broadway.
LOUISVILLE, Jefferson County.
Coon, George S., M.D., 617 Fourth Street.
Mann, Jessie E., M.D., Fonda Block.
Murphy, Sarah A., M.D., 727½ Eighth Street.
Williams, Margaret Cowen, M.D., 2909 Portland Avenue.
MIDWAY, Woodford County.
Kasselmann, Harry C., M.D.
NEWPORT, Campbell County.
Fischback, Frederick W., M.D.
RICHMOND, Madison County.
Holton, Charles Smoot, M.D., 316 Main Street.

LOUISIANA

NEW ORLEANS, Orleans County.
Aiken, John Gale, M.D., 1102 St. Charles Avenue.
Mayer, Charles R., M.D., 1032 St. Charles Avenue.

MAINE

AUBURN, Androscoggin County.
Renwick, Wano J., M.D., 102 Goff Street.
AUGUSTA, Kennebec County.
Hill, W. Scott, M.D., 134 State Street.
Thompson, W. S., M.D., 173 State Street.
BANGOR, Penobscot County.
Fellows, William Edwin, M.D., 134 Hammond Street.
Jefferds, George P., M.D.
BATH.
McDonald, C. W., M.D., 958 Washington Street.
Prilay, John M., M.D., 83 Essex Street.
BELFAST, Waldo County.
Flanders, David P., M.D.
BIDDEFORD, York County.
Ferguson, F. A., M.D.
Trull, J. Frank, M.D., 295 Main Street.
BREWER.
Newton, Carrie E., M.D., 28 Holyoke Street.
CASTINE, Hancock County.
Cushman, Mary Floyd, M.D., Main Street.
GARDNER, Kennebec County.
Heath, Gertrude Emma, M.D., 164 Water Street.
OAKLAND.
Holmes, M. T., M.D.
PORTLAND, Cumberland County.
Johnston, R. T., M.D., 469 Cumberland Street.
Titus, Emily N., M.D., 147 Spring Street.
Palmer, John T., M.D., 307 Congress Street.
Worcester, Samuel, M.D., 597 Congress Street.
ROCKLAND, Knox County.
Wasgatt, Rowland John, M.D.
SACO, York County.
Graves, S. P., M.D.
SEARSPORT.
Evelith, Fred. S., M.D.

MAINE—Continued

SKOWHEGAN, Somerset County.
Johnson, Cora May, M.D.

SOLON, Somerset County.
Paul, C. Almon, M.D., 74 Minn Street.

WATERBOROUGH, York County.
Emery, John Taylor Gilman, M.D., 27 Main Street.

MARYLAND

BALTIMORE, Baltimore County.
Barnard, James S., M.D., 2734 North Charles Street.
Brewster, Cora B., 1027 Madison Avenue.
Brewster, Flora A., M.D., 1221 Madison Avenue.
Chandlee, Henry, M.D., 704 West North Avenue.
Cole, Edw. Z., M.D., 1534 Mt. Royal Avenue.
Comstock, William C., M.D., 407 North Charles Street.
Dean, Mary M., M.D., 901 North Calvert Street.
Evans, John, M.D., 22 North Carey Street.
Evans, Henry J., M.D., Fayette and Carey Streets.
Janney, O. Edward, M.D., 837 North Eutaw Street.
Miller, Irving, M.D., 1734 St. Paul Street.
Morgan William L., M.D., 202 West Franklin Street.
Pannebaker, William M., M.D., 1209 Madison Avenue.
Parkhurst, Alice S., M.D., 1410 Park Avenue.
Plumb, Amy E., M.D., 913 North Fulton Avenue.
Price, Eldridge C., M.D., 1012 Madison Avenue.
Rumsey, Charles Leslie, M.D., 812 Park Avenue.
Shearer, Thomas L., M.D., 345 North Charles Street.
Shearer, Thomas L., M.D., 345 North Charles Street.
Shower, George Theodore, M.D., 421 Roland Avenue.
Wanstall, Alfred, M.D., 921 Cathedral Street.
Wisner, Jacob W., 315 North Paca Street.

CHESTERTOWN, Kent County.
Dodd, Harry L., M.D.
Simmons, Harry Benge, M.D., 18 Market Place.

CUMBERLAND.
Stansbury, H. M., M.D., 88 Bedford Street.

EASTON, Talbot County.
Garrison, Joseph Sherman, M.D.

FOREST GLEN, Montgomery County.
Wright, George H., M.D.

FREDERICK, Frederick County.
Burck, Lewis A., M.D., 17 East Second Street.
Goodell, Charles F., M.D., 19 East Patrick Street.
Hendrix, John Oliver, Castle Building.

HAGERSTOWN, Washington County.
Stauffer, Alvin P., M.D.

MASSACHUSETTS

ADAMS, Berkshire County.
Bond, Aaron John, M.D., 1 Center Street.

ALLSTON, Suffolk County.
Stiles, Charles Wallace, M.D., 45 Beacon Street.

AMHERST.
Darby, Edw. A., M.D., 5 School Street.
Darby, M. G., M.D., 5 School Street.

ANDOVER, Essex County.
Clarke, Henry L., M.D., 3 Punchard Avenue.
Edgar, W. L., M.D., 503 Main Street.
Sanborn, Emma M. E., M.D., 4 Morton Street.
Scott, Cyrus W., M.D., 90 Main Street.

MASSACHUSETTS—Continued

ATHOL, Worcester County.
Forbes, Charles Holt, M.D., 429 School Street.
Larkeque, Garrett B. B., M.D., 345 Main Street.

ATTLEBORO.
Amsden, H. H., M.D., 33 Bank Street.

AUBURNDALE, Middlesex County.
Clarke, Mortimer Hall, M.D., 221 Auburn Street.

BARRE.
Bixby, E P., M.D.

BOSTON, Suffolk County.
Angell, Henry C., M.D., 16 Beacon Street.
Appleton, Lucy, M.D. 711 Boylston Street.
Bangs, Edwin M., M.D., East Newton.
Barnes, William Ellsworth, M.D., 432 Columbia Avenue.
Bassett, Alice H., M.D., 2 Commonwealth Avenue.
Batchelder, Frederick P., M.D., 411 Massachusetts Avenue.
Bell, James B., M.D., 178 Commonwealth Avenue.
Bellows, Howard P., M.D., 220 Clarenden Street.
Bender, Prosper, M.D., Exeter Chambers.
Briggs, Joseph Emmons, M.D., 206 Huntington Avenue.
Bruckett, Elizabeth A., M.D., 1458 Vermont Street.
Burroughs, Amelia, M.D., 31 Massachusetts Avenue.
Bush, Charles W., M.D., 444 Massachusetts Avenue.
Cahill, Eliza B., M.D., Westminster, Copley Square.
Calderwood, Samuel Herbert, M.D., 221 Warren Street.
Castle, Catherine W., M.D., 5 Union Park.
Chadwell, Orville R., M.D., 80 East Concord.
Chandler, Thomas Evans, M.D., 13 Sparhawk Street, Brighton.
Childs, Helen S., M.D., 454 Centre Street, Jamaica Plain.
Church, Adaline B., M.D., 102 Huntington Avenue.
Clapp, H. C., M.D., 334 Commonwealth Avenue.
Clapp, James Wilkinson, M.D., 10 Park Square.
Coffin, John Lambert, M.D., 229 Berkeley Street.
Colburn, Frederick W., M.D., 160 Newbury Street.
Colby, Edw. P., M.D., 845 Boylston Street.
Coon, Marion, M.D., Hotel "Ilkey."
Crane, Clarence, M.D., 228 Huntington Avenue.
Cross, Hiram B., M.D., 21 Seavern's Avenue, Jamaica Plain.
Cummings, M. Louisa, M.D., 178a Tremont Street.
Dalrymple, A. T., M.D., 171 K Street.
Davis, Fred. A., M.D., 80 Huntington Avenue.
Drake, Olin M., M.D., 70 Huntington Avenue.
Earl, George H., M.D., 153 Newbury Street.
Emerson, Nathaniel Waldo, M.D., 685 Boylston Street.
Flint, Almena J. Barker, M.D., 102 Huntington Avenue.
French, Winslow B., M.D., 164 Huntington Avenue.
Fuller, Walter Tracy, M.D., Washington Street, Mt. Bowdoin.
Gary, Clara Emerette, M.D., 416 Marlborough Street.
Gooding, E. Jeanette, M.D., 223 West Springfield Street.
Halsey, Frederick W., M.D., 272 Newberry Street.
Hill, Noble Hind, M.D., 35 Huntington Avenue.
Hinson, Jacob N., M.D., 601 Boylston Street.
Homer, Harriet, M.D., 551 Massachusetts Avenue.
Houghton, Neihard H., M.D., 867 Boylston Street.
Jackson, William L., M.D., 76 Dudley Street, Roxbury.
Johnson, E. R., M.D., 220 Clarendon Street.
Kennedy, Alonzo L., M.D., 228 Pleasant Street, Brookline.
Klein, A. A., M.D., 123 Blue Hill Avenue.
Krauss, James, M.D., 419 Boylston Street.
Krebs, Francis H., M.D., 42 Union Park.

MASSACHUSETTS—Continued

Leavitt, Mary A., M.D., Massachusetts Homœopathic Hospital.
Loring, Benjamin Tappan, M.D., 229 Berkeley Street.
Mann, Martha Elizabeth, M.D., 2 Commonwealth Avenue.
Mann, William P., M.D., East Concord Street.
Mason, Gilbert M., M.D., 208 Nepouset Avenue.
Miller, Lisbeth Dora, M.D., 12 Cordis Street.
Morris, F. M., M.D., 138 Marlboro Street.
Mosher, Mary E., M.D., 53 Blue Hill Avenue, Roxbury.
Neale, Lillian Bell, M.D., 138 Marlboro Street.
Packard, Horace, M.D., 470 Commonwealth Avenue.
Paul, Williard A., M.D., 157 Harvard Street, New Dorchester.
Payne Frederick W., M.D., 100 Boylston Street.
Payne, James H., M.D., 344 Commonwealth Avenue.
Payne, John Howard, M.D., Pierce Building, Copley Square.
Pearson, Mary M., M.D., 361 Massachusetts Avenue.
Pease, Ella Gertrude, M.D., 214 Commonwealth Avenue.
Perkins, Nathaniel R., M.D., 1122 Adams Street, Dorchester.
Powers, A. H., M.D., 406 Massachusetts Avenue.
Ransom, Eliza Tayuor, 373 Commonwealth Avenue.
Rice, George Brackett, M.D., 220 Clarendon.
Rice, H. E., M.D., 685 Boylston Street.
Richardson, Frank C., M.D., 685 Boylston Street.
Roberts, Frank E., M.D., 100 Huntington Avenue.
Sanders, Orren B., M.D., 353 Commonwealth Avenue.
Sawyer, Willis Herbert, M.D., "The Peabody."
Sherman, James Turner, M.D., 29 Virginia Street.
Sherman, John H., M.D., 534 Broadway.
Simmons, Clara C., M.D., 407 Marlboro Street.
Smith, Conrad, M.D., 279 Dartmouth Street.
Smith, Winfield S., M.D., 845 Boylston Street.
Souther, Robert F., 1122 Commonwealth Avenue.
Southgate, Robert W., M.D., 2 Commonwealth Avenue.
Southwick, George R., M.D., 31 Massachusetts Avenue.
Spalding, Harry O., M.D., 50 Seavern's Avenue, Jamaica Plain.
Spalding, Henry E., M.D., 519 Beacon Street.
Strong, Thomas M., M.D., 176 Huntington Avenue.
Suffa, George A., M.D., 220 Clarendon Street.
Sutherland, John Preston, M.D., 295 Commonwealth Avenue.
Swain, Mary L., M.D., 178 Huntington Avenue.
Taylor, Esther W., M.D., 36 Steelman Street.
Taylor, James R., M.D., 174 Sydney Street, Dorchester.
Tobey, Walter Henry, M.D., 173 Newbury Street.
Tompkins, Albert H., M.D., 20 Seavern's Avenue, Jamaica Plain.
Thompson, Charles E. P., M.D., 2 Commonwealth Avenue.
Watters, William Henry, M.D., 80 East Concord Street.
Wells, David Washburne, M.D., "The Westminster," Copley Square.
Wesselhoeft, Conrad, M.D., 661 Boylston Street.
Wesselhoeft, William Fessenden, M.D., 851 Boylston Street.
Wesselhoeft, William P., M.D., 176 Commonwealth Avenue.
Windsor, Sarah S., M.D., 138 Marlboro Street.

BROCKTON, Plymouth County.
Goodwin, E. E., M. D., 31 Battle Street.
Stedman, J. P., M.D., 55 West Elm Street.
Tilton, Nellie Morris, M.D., 15 Bartlett Street.

BROOKLINE, Norfolk County.
Defriez, W. P., M.D., 537 Washington Street.
Jones, Everett, M.D., 1618 Beacon Street.
Moore, J. Herbert, M. D. 1339 Beacon Street.
Percy, Frederick B., M.D.
Turner, Maurice W., M.D., 127 Harvard Street.

MASSACHUSETTS—Continued

CAMBRIDGE, Middlesex County.
Chase, Herbert A., M.D., 950 Massachusetts Avenue.
Chase, Hiram L., M.D., 924 Massachusetts Avenue.
Diemer, Lena Hess, M.D., 15 Everett Street.
Harvey, W. E., M.D., 10 North Magazine Street.
Rockwell, John A., Jr., M.D., 26 Garden Street.
Thomas, Charles Holt, M.D., 427 Broadway.
Thomas, W. K. S., M.D., 427 Broadway.
Wesselhoeft, Walter, M.D., 26 Garden Street.

CHARLESTOWN, Suffolk County.
Allen, Edward Everett, M.D., 385 Main Street.
Wood, Nelson Mervin, M.D., 72 High Street.

CHELSEA, Suffolk County.
Rollins, Charlotte A., M.D.

CHICOPEE.
Fletcher, S. E., M.D., 96 Grape Street.

CLINTON.
Stewart, L. A., M.D.
Streeter, H. A., M.D., 178 High Street.

DEDHAM, Norfolk County.
Babcock, Francis L., M.D., 15 Walnut Street.
Haskins, Bertha L., M.D.

DIGHTON.
Williams, D. A., M.D.

DORCHESTER, Suffolk County.
Emerson, Frederick Lincoln, M.D., 50 Hancock Street.
Fuller, Walter Tracy, M.D., 31 Harvard Street.
Hornby, Mary Stamper, M.D.
Worcester, John Fonerden, M.D., 405 Washington Street.

EAST WEYMOUTH, Norfolk County.
Chase, Joseph, Jr., M.D.

EVERETT.
Hanson, Wm. G., M.D., 27 Norwood Street.

FALL RIVER, Bristol County.
Babcock, D. A., M.D.
Hill, Lucy Chaloner, M.D., 492 North Main Street.
Van der Burgh, David W., M.D., 320 Rock Street.

FITCHBURG, Worcester County.
Bennett, William Henry, M.D.
Bingham, Russell, M.D., 62 Day Street.
Perkins, Archie Elmer, M.D., 82 Day Street.

FRAMINGHAM, Middlesex County.
Keith, Ellen L., M.D., Winter Street.

FRANKLIN.
Lewis, E. R., M.D., 865 Central Street.

GARDNER, Worcester County.
Colby, Edwin A., M.D.,

GREAT BARRINGTON.
Lane, O. W., M.D., 267 Main Street.

GLOUCESTER, Essex County.
Conant, Thomas, M.D.

HARWICH.
Handy, H. D., M.D.

HAVERHILL, Essex County.
Hubbell, Adelbert M., 107 Winter Street.
Lamb, Frances G., M.D.
Jewett, Howard Clifton, 75 Vine Street.
McDougall, D., M.D., 131 Minn Street.

HINGHAM, Plymouth County.
Spalding, Samuel H., M.D.

MASSACHUSETTS—Continued

HOPEDALE.
Coffin, George H., M.D.,
HUDSON.
Glazier, T. P., M.D., 12 Lincoln Street.
HOLYOKE.
Sackett, H. R., M.D., 251 North Hampton Street.
Woods, F. A., M.D., 255 High Street.
KINGSTON, Plymouth County.
Barstow, Benjamin P., M.D.
LAWRENCE, Essex County.
Dunham, George Perry, M.D., 252 Broadway.
Earley, William C., M.D., 117 East Haverhill.
Scott, Chester W., M.D.
Stowell, A. A., M.D., 193 Broadway.
LEOMINSTER, Worcester County.
Latham, Carrie A., M.D., 50 Central Street.
Miller, Edward Roscoe, M.D., 15 Merriam Street.
LEXINGTON, Middlesex County.
Piper, Fréd Smith, M.D.
LOWELL, Middlesex County.
Holt, Edward B., M.D.
Leland, Clarence H., M.D., 202 Merrimac Street.
Marfin, G. Forest, M.D., 19 Paige Street.
Sanders, C. B., M.D., 475 West Ford Street.
Van Duersen, George Livesay, M.D., 17 Kirk Street.
LYNN, Essex County.
Carr, George B., 67 North Commons Street.
Haywood, George William, M.D., 45 Hanover Street.
Hopkins, William T., M.D., 65 Broad Street.
Marden, W. L., M.D., 171 Lewis Street.
Perkins, Stella N., M.D., 20 South Common Street.
Varney, Edith Charles, M.D., 132 Broad Street.
MALDEN, Middlesex County.
Burpee, C. C., M.D., 5 Carnet Street.
Hodgdon, Frank A., M.D., 83 Salem Street.
Whiting, Walter B., M.D.
MARBLEHEAD, Essex County.
Devereaux, Jane S., M.D., 78 Pleasant Street.
MATTAPAN, Suffolk County.
Palmer, Anna Chipman, M.D., Houston Avenue.
MIDDLEBORO, Plymouth County.
Cummings, Charles Stearn, M.D., 40 Oak Street.
Fryer, Winsor F., M.D., 26 Oak Street.
MILLFORD.
Harvey, Frank T., M.D., 6 South Mano Street.
MILTON.
Browne, P. K., M.D., Granite Avenue.
MONSON, Hampden County.
Rand, John Prentice, M.D., 74 Main Street.
NANTUCKET, Nantucket County.
Coleman, Ellingwood B., M.D., Centre Street.
NEW BEDFORD, Bristol County.
Hunt, Charles R., M.D., 474 County Street.
Seip, Charles Lewis, M.D., 299 Union Street.
Shaw, John Cook, M.D., 23 South Sixth Street.
Sisson, Edward R., M.D.
NEWBURYPORT, Essex County.
Foss, David, M.D.
Hall, C. F. A., M.D., 132 High Street.
Johnson, Frederick Charles, M.D., 26 Market Street
Worcester, George W., M.D.

MASSACHUSETTS—Continued

NEWTON, Middlesex County.
Bothfeld F., M.D., 148 Church Street.
Reed, Clara D. W., M.D., 140 West Church Street.
NEWTON CENTRE, Middlesex County.
Fessenden, C. H., M.D., 34 Pelham Street.
May, George E., M.D., 661 Commonwealth Avenue.
Sylvester, Stephen Alden, M.D., Beacon Street.
NEWTON HIGHLANDS, Middlesex County.
Eaton, Samuel Lewis, M.D.
Wentworth, Caroline Young, M.D., 57 Lincoln Street.
NEWTONVILLE, Middlesex County.
Talbot, George H., M.D.
Wilkins, George H., 306 Walnut Street.
NORTHAMPTON, Hampshire County.
Copeland, Elmer C., M.D., 70 Elm Street.
ORANGE, Franklin County.
Monroe, John Eugene, M.D.
PITTSFIELD, Berkshire County.
Noyes, Henry A., M.D.
PLYMOUTH, Plymouth County.
Pierce, Helen F., M.D., 6 North Street.
Shaw, John Joseph, M.D., 14 Brewster Street.
READVILLE.
Dean, H. T., M.D., 8 Chester Street.
RUTLAND.
Butler, D. P., M.D.
SALEM, Essex County.
Gardner, Frank Augustine, M.D., 23 North Street.
Lukeman, Mary R., M.D., 17 North State Street.
Morse, Charles W., M.D., 98 Washington Street, East.
Mudge, Catherine Gertrude, M. D., 309 Essex Street.
Percy, George Emory, M.D.
SOMERVILLE, Middlesex County.
Carvill, Alphonso H., M.D.
Cole, Anna B. T., M.D., 34 Pearl Street.
Currier, Mary B., M.D., 345 Broadway.
Lee, W. T., M.D., 254 Broadway.
Newton, Frank Loomis, M.D., 147 Highland Avenue.
Peasley, Emma Janet, M.D.
SOUTH ASHBURNHAM.
Blackmore, R., Jr., M.D.
SOUTHBRIDGE, Worcester County.
Edwards, Franklin W., M.D., 26 Hamilton Street.
SOUTH BEVERLY.
Bougart, W. E., M.D., 278 Cabot Street.
SOUTH BOSTON.
Ham, William A., M.D., 32 Ward Street.
SOUTH LINCOLN, Middlesex County.
Blodgett, Stephen H., M.D.
SPRINGFIELD, Hampden County.
Bennitt, Francis N., M.D., 120 Summer Avenue.
Brown, Plumb, M.D., 503 State Street.
Carmichael, John H., M.D., 41 Maple Street.
Cushing, Alvin M., 137½ State Street.
Nichols, Frank, I., M.D., 108 Maplewood Terrace.
Parsons, Clarice Johnston, M.D., 177 State Street.
Roberts, Oscar Waldo, M.D., 24 Thompson Street.
Sweet, Clara Maria, M.D., 14 Chestnut Street.
STONEHAM, Middlesex County.
Jenney, Arthur Barker, M.D., 38 Franklin Street.

MASSACHUSETTS—Continued

TAUNTON, Bristol County.
Dwinell, Byron L., M.D.
Hayward, Joseph W., M.D.
WALTHAM, Middlesex County.
Emery, Winfred Newell, M.D., 808 Main Street.
Sears, E. A., M.D., 58 Adams Street.
WARE, Hampshire County.
Spencer, George Frederick Allen, M.D., 40 Church Street.
WAREHAM, Plymouth County.
Gleason, Charles Sherman, M.D.
WELLESLEY, Norfolk County.
Barker, Emily J., M.D., "The Eliot."
Weston, Isabel G., M.D., Washington Street.
Wiswall, Edward H., M.D.
WESTBORO, Worcester County.
Adams, George Smith, M.D.
Buhrman, Ettie Ray, M.D.
Klopp, Henry Irwin, M.D.
WEST NEWTON, Middlesex County.
Paine, Horace, M.D.
Paine, N. Emmons, M.D.
Wilcox, F. S., M.D.
WESTPORT, Bristol County.
Tupper, John Darrow, M.D.
WEST ROXBURY, Suffolk County.
Howard, Alonzo Gale, M.D., 1977 Centre Street.
WINCHESTER.
Maynard, H. E., M.D., 76 Church Street.
Shepard, H. L., M.D., 31 Church Street.
WOBURN, Middlesex County.
Chalmers, Robert, M.D., 47 Pleasant Street.
Packer, Henry E., M.D., 11 Pleasant Street.
WORCESTER, Worcester County.
Allen, Lamson, M.D., 20 Elm Street.
Barton, J. Marcus, M.D.
Bray, Amanda C., M.D., 9 Walnut Street.
Crisand, Carl, M.D., 2 Charlotte Street.
Forbes, George F., M.D., 42 Williams Street.
Jones, E. A., M.D., 78 Pleasant Street.
Leib, Edwin Roy, M.D., 49 Pleasant Street.
Nichols, Charles L., M.D., 248 Main Street.
Rockwell, Alfred Elijah Perkins, M.D., 248 Main Street.
Sargent, C. S., M.D., 44 Pleasant Street.
Warren, John K., M.D., 68 Pleasant Avenue.
Witherbee, Lucy E., M.D., 2 King Street.

MICHIGAN

ADRIAN, Lenawee County.
Lards, Charles H., M.D., 33 Butler Street.
ALLEGAN, Allegan County.
Osman, Elmer Douglas, M.D.
ALPENA, Alpena County.
Williams, Clarence M., M.D.
ANN ARBOR, Washtenaw County.
Copeland, Royal S., M.D., 407 North Ingalls.
Dewey, Willis A., M.D.
Hinsdale, Wilbert B., M.D.
Kinyon, Claudius B., M.D.
Myers, Dean Wentworth, M.D., 345 South Division Street.
Smith, Dean T., M.D., 712 East Washington Street.
Westfall, Floyd E., M.D., East Orange Street.

MICHIGAN—Continued

BAY CITY, Bay County.
Ball, Joseph Harris, M.D.
Edmunds, Charles W., Sixth and Adams Streets.
Nottingham, John C., M.D., 218 Fifth Avenue.
BRONSON, Branch County.
Mowry, Henry P., M.D.
BROOKLYN, Jackson County.
Jones, Leonidas M., M.D.
CARO, Tuscola County.
Chase, Sherman F., M.D.
CHARLOTTE, Eaton County.
Allen, Sarah J., M.D., 324 Lawrence Avenue.
DETROIT, Wayne County.
Augustin, George William, 469 Third Avenue.
Babington, John, M.D., 84 Sixth Street.
Bailey, William M., M.D., 25 Miami Avenue.
Bowen Emma K., M.D., 156 St. Auburn Avenue.
Caron, George C., M.D., 30 Henry Street.
Cumrine, Charles G., M.D., 1444 Majestic Building.
Diehl, William H., 505 Mack Street.
Drake, H. B., M.D., 32 Adams Street.
Graham, Alfred, 270 Woodward Avenue.
Griffin, Judson M., M.D., 106 Miami Avenue.
Hoff, Edward C., Grace Hospital.
Hoffman, W. K., M.D., 228 West Fort Street.
Knight, Stephen H., M.D., 18 West Willis Avenue.
LaSeure, Oscar, M.D., 32 West Adams Street.
MacLachlan, Daniel A., M.D., 1301 Majestic Building.
Miller, Christopher C., M.D., 31 Winder Street.
Obetz, Henry L., M.D., 21 Duffield Street.
Olin, Rollin C., M.D., 110 Henry Street, West.
Orleman, E. Louise, M.D., 32 Bagg Street.
Richards, R. Milton, 213 Milton Avenue.
Spranger, M. J., M.D., 23 Adams Avenue.
Stevens, Rollin B., 6 Adams Avenue, West.
Williard, Mary A., M.D., 156 Warren Avenue, West.
Wilson, Thomas P., M.D., 74 Forest Street, East.
DOWAGIAC, Cass County.
Herkimer, George R., M.D.
GRAND HAVEN, Ottawa County.
Reynolds, John N., M.D.
GRAND RAPIDS, Kent County.
Hoxie, Albertus T., M.D., Porter Block.
Norris, Maria Whittelsey, M.D., Widdicomb Building.
Sinclair, Malcom C., M.D., Sheldon Street.
HOLLY, Oakland County.
Bartholomew, Daniel D., M.D.
HOWELL, Livingston County.
Mills, Wesley, J., M.D.
IONIA, Ionia County.
Defendorf, John J., M.D.
IRVING, Barry County.
Hendershott, Lizzie A., M.D.
KALAMAZOO, Kalamazoo County.
Balyeat, Edmund A., M.D., 122 West Main Street.
Cornell, Albert B., M.D.
LANSING, Ingham County.
Jenkins, Charles G., M.D., 224 Washington Avenue.
Nottingham, David M., M.D.
MARINE CITY, St. Clair County.
Armsbury, Aaron B., M.D.

MICHIGAN—Continued

MASON.
Mann, George E., M.D.
MOUNT CLEMENS, Macomb County.
Lenfesty, John A., M.D., 8 South Gratiot Avenue.
MUSKEGON, Muskegon County.
Le Fevre, George L., M.D., Mason Block.
Marvin, La Ray, M.D., 221 Clay Avenue.
NILES, Berrien County.
Ullrey, Arthur O., M.D.
OWOSSO, Shiawasse County.
Crum, J. D., M.D., 314 North Ball Street.
PETOSKEY, Emmet County.
Ramsdell, Oscar L., M.D., 315 East Mitchell.
PORTLAND, Ionia County.
Allen, George D., M.D.
Smith, Chester, M.D.
REED CITY, Osceola County.
Spinney, Andrew B., M.D.
SAGINAW, Saginaw County.
Cowell, Joseph H., M.D., 301 South Warren Avenue.
Knott, Harriet A., M.D., 203 Avery Building.
SAULT STE. MARIE.
Husband, Francis H., M.D.
SOUTH BEND.
Clark, Stanley A., M.D.
SPRING LAKE, Ottawa County.
Baker, Harley Nathan, M.D.
ST. JOHNS, Clinton County.
Dodge, John B., M.D.
STURGIS, St. Joseph County.
Van Vleck, Peter H., M.D.
TECUMSEH, Lenawee County.
Frost, William A., M.D.
THREE RIVERS, St. Joseph County.
Clark, Whitman E., M.D.
TRAVERSE CITY.
Stevens, Juoquine M., M.D.
YPSILANTI, Washentaw County.
Cornue, P. W., M.D., 9 Washington Street.

MINNESOTA

ALEXANDRIA, Douglas County.
Peake, Francis, M.D.
CROOKSTON, Polk County.
Just, August Adolph, M.D.
DULUTH, St. Louis County.
Bowman, Frederick C., M.D., 293 Second Avenue, W.D.
FERGUS FALLS, Otter Tail County.
Welch, George Oaks, M.D.
GOOD THUNDER, Black Earth County.
Schlesselman, John Theodore, M.D.
GRANADA, Martin County.
Hamlin, George Baldwin, M.D.
MARSHALL, Lyon County.
Renninger, John S., M.D.
MINNEAPOLIS, Hennepin County.
Aldrich, Henry C., M.D., 313 Medical Block.
Eaton, Cora E. Smith, M.D., 717 Masonic Temple.
Fisher, Anna M., M.D., 412 Nicollet Avenue.
Gibson, Frederick M., M.D., 602 Nicolllet Avenue.
Hall, Levi, M.D., 77 Highland Avenue.

MINNESOTA—Continued

Higbee, Albert E., M.D., Masonic Temple.
Morning, David W., M.D., 604 Pillsbury Building.
Humphreys, Otis M., M.D., 1345 So. First Avenue.
Koch, Margaret, M.D., 1009 University Avenue.
Leonard, William E., M.D., 608 Nicollet Avenue.
Richardson, Oscar K., M.D., 303 Masonic Temple.
Ripley, Martha G., M.D., 40 So. Tenth Street.
Roberts, George F., M.D., 604 Pillsbury Building.
Roberts, William Burchard, M.D., Pillsbury Building.
Williamson, Alonzo P., M.D., Pillsbury Building.

RED WING, Goodhue County.
Stephens, Aaron M., M.D., 431 Fourth Street.

SLAYTON, Murray County.
Lowe, Thomas, M.D.

ST. JOHNS, Stearns County.
Dodge, John P., M.D.

ST. PAUL, Ramsey County.
Briggs, Warren S., M.D., Germania Bank Building.
Cobb, Sheridan G., M.D., 1852 Marshall Avenue.
Higbee, Chester G., M.D., 130 Western Avenue.
Hutchinson, Henry, M.D., "The Aberdeen."
Man, Eugene L., M.D., 604 Endicott Arcade.
Ogden, Benjamin H., M.D., Ernst Building.

WINONA, Winona County.
Wilberton, Lawrence G., M.D.

MISSOURI

CARTHAGE, Jasper County.
Flower, Frank W., M.D.

CHILLICOTHE, Livingston County.
Gordon, George A., M.D.

EXCELSIOR SPRINGS, Clay County.
Henry, Samuel Dwyer, M.D.

FULTON, Callaway County.
Reilly, John Armstrong, M.D.
Reilly, Walter E., M.D.
Theilmann, Emil, M.D.

GARDEN CITY, Cass County.
Schoor, Edward, M.D.

HANNIBAL, Marion County.
Waldo, Elmer E., M.D., 1052 Broadway.

KANSAS CITY, Jackson County.
Aplynne, Guy Elmont, M.D., 1214 Main Street.
Colt, Emily S., M.D., 2327 Tracy Avenue.
Cramer, William E., M.D., 1103 Main Street.
Dean, George A., M.D., 1103 Main Street.
Delap, Silas, C., M.D., 1214 Main Street.
Elliot, Frank, M.D., Ridge Building.
Forster, William A., M.D., 328 Rialto Building.
Foster, William Davis, M.D., 420 West Eleventh Street.
Hudson, Thomas Howard, M.D., 1001 Prospect Avenue.
Jenney, William H., M.D., 324 West Twelfth Street.
Patterson, Joseph M., M.D., 306 Commerce Building.
Ray, William L., M.D., 1214 Main Street.
Runnels, Moses Thurston, M.D., 912 Walnut Street.
Starcke, Andrew Herman, M.D., 639 Kansas Avenue.
Van Scoyoc, Lloyd G., M.D., 1103 Main Street.
Wise, Julius C., M.D., 14 West Twelfth Street.

ST. JOSEPH, Buchanan County.
Hall, William G., M.D., 7th and Edward Streets.

MISSOURI—Continued

ST. LOUIS, St. Louis County.
Blanke, Theodore F., M.D., 2239 South Grand Avenue.
Campbell, James A., 206 Mermod-Jaccard Building.
Chamblin, Bayles, 2427 N. Grand Avenue.
Comstock, Thomas Griswold, M.D., 3401 Washington Avenue.
Galloway, William Lincoln, M.D., 1232 Taylor Avenue.
Gibson, David M., M.D., 241 South Jefferson Street.
Gilbert, William Wallace, M.D., 314 South Jefferson Avenue.
Grundemann, J. William, M.D., 1000 West Jefferson Avenue.
Gunderlach, Charles H., M.D., 3900 Westminster Place.
Gutherz, Lizzie Gray, M.D., 3689 Olive Street.
Harris, William John, M.D., 3514 Lucas Avenue.
Jones, W. E., 3859 Page Avenue.
Kershaw, J. Martine, M.D., 3421 Washington Avenue.
Luytis, Carl J., M.D., 2100 Lafayette Avenue.
McElwee, L. Claude, M.D., 1113 West Grand.
Mellies, Charles, M.D., 3825 North Twentieth Street.
Morgan, Willis B., M.D., 4200 North Grand Avenue.
Young, Willis Brock, 2344 Park Avenue.
UNIONVILLE, Putnam County.
Perry, W. H., M.D.

MONTANA

BUTTE CITY, Silver Bow County.
Cowperthwaite, Joseph Erving, M.D., 9 Owsley Block.
GREAT FALLS, Black County.
Frizzell, John W., M.D., 601 Central Avenue.
HELENA, Lewis and Clarke County.
Thompson, Charles S. W., M.D.

NEBRASKA

CRETE, Saline County.
Foss, John B., M.D.
FAIRBURN, Jefferson County.
Clarke, Harvey L., M.D.
FREMONT, Dodge County.
Leake, Endell N., M.D., 237 West Sixth Street.
FULLERTON, Nance County.
Kinyon, Henry E., 9 Fuller Street.
HOSPITAL.
Young, George Alexander, M.D., Hospital for Insane.
LINCOLN, Lancaster County.
Bailey, Benjamin F., M.D., 141 South Twelfth Street.
Finney, Everett B., M.D., 1329 North Twelfth Street.
Perky, Leonore, M.D., 141 South Twelfth Street.
Shoemaker, Charles A., M.D., 1117 L Street.
NELSON, Nuckolls County.
Cate, William A., M.D., Union Building.
NORFOLK, Madison County.
Teal, Frederick F., M.D.
OMAHA, Douglas County.
Alexander, Ernest L., 1204 North Twenty-fourth Street.
Connell, Ralph W., M.D., 1707 Dodge Street.
Edwards, Laura A., M.D.
Foote, Dellizon A., M.D., 216 Paxton Block.
Hanchett, William Henry, M.D., Bee Building.
Mattson, A. S., Bee Building.
Wood, Orlando S., M.D., 521 N. Y. L. Building.
PLATTE CENTER, Platte County.
Benthack, Peter L., M.D.

NEVADA.

CARSON CITY, Ormsby County.
Wagner, Philippina, M. D.

NEW HAMPSHIRE.

BRISTOL.
Bishop, C., M.D.
DOVER, Strafford County.
Smith, George R., M.D.
EXETER, Rockingham County.
Tuttle, Walter, M. D., 20 Court Street.
FRANCESTOWN.
Stevens, E. D., M.D.
HOLDERNESS.
Talbot, Winthrop Tisdale, M.D.
KEENE, Cheshire County.
Worcester, Frank D., M.D.
LACONIA, Belknap County.
Wiley, Rebecca W., M.D., 160 Main Street.
LAKEPORT, Belknap County.
Wrisley, John A., M. D.
LITTLETON, Grafton County.
Nobles, William C., M.D., East Main Street.
MANCHESTER, Hillsboro County.
Abbot, A. F., M.D.
Dodge, Charles E., M.D., 913 Elm Street.
Morse, Martin V. B., M.D.
MILFORD, New Haven County.
Hinds, William H. W., 52 Nashua Street.
Putney, Willis S., Broad Street.
NASHUA, Hillsboro County.
Rounseval, Charles Sedgwick, M.D., 211 Main Street.
NEW BOSTON, Hillsboro County.
Gould, Herbert D., M.D.
PENACOOK, Merrimack County.
Roby, George F., M.D.
SOMERSWORTH.
Harvey, A. K., M.D., 71 High Street.
Willis, J. E., M.D.
WHITEFIELD.
Wiggin, H. M., M.D.
WINCHESTER.
Lobdell, A. J., M.D.

NEW JERSEY

ASBURY PARK, Monmouth County.
Ackerman, James F., M.D., 905 Grand Avenue.
Bryan, Joseph Harter, M.D., 221 Asbury Avenue.
Upham, Ella Prentiss, M.D.
ATLANTIC CITY, Atlantic County.
Baily, Alfred W., M.D., 1809 Pacific Avenue.
Balliet, Lorenzo Dow, M.D., 1001 Atlantic Avenue.
Cromwell, Lydia Herts, M.D., Galan Hall.
Crosby, George W., M.D., 716 Atlantic Avenue.
Fleming, John R., M.D., 1903 Pacific Avenue.
Gardiner, William G., M.D., 1303 Pacific Avenue.
Jackson, George V., M.D., 1618 Pacific Avenue.
Lyon, Melvin S., M.D., 716 Atlantic Avenue.
Miller, Mary, M.D., 5 South Carolina Avenue.
Munson, Milton L., M.D., 1503 Pacific Avenue.
Sooy, Walter C., M.D., 1921 Pacific Avenue.
Youngman, Maurice D., M.D., 1618 Pacific Avenue.

NEW JERSEY—Continued

ATLANTIC HIGHLANDS, Monmouth County.
Fay, George De Witt, M.D., 23 Bay View Avenue.
BELLEVILLE, Essex County.
Cyphers, Edward O., M.D., 378 Washington Avenue.
BELVIDERE, Warren County.
Lefferts, Franklin P., M.D.
BLOOMFIELD, Essex County.
Bull, William H. H., M.D., 35 Park Place.
Post, Walter, M.D.
BRIDGETON, Cumberland County.
Streets, Jacob G., M.D.
BURLINGTON, Burlington County.
Shreve, Joseph, M.D.
CAMDEN, Camden County.
Artz, Jerome L., M.D., 3000 Westfield Avenue.
Garrison, H. C., M.D., 428 North Fifth Street.
Gumbrecht, Oscar Leonard, M.D., 615 Market Street.
Hadley, Charles F., M.D., 3320 Federal Street.
Howard, Erving Melville, M.D., 401 Linden Street.
McGeorge, Wallace, M.D., 521 Broadway.
Middleton, M. F., M.D., 423 Market Street.
Woodward, George D., M.D., 211 Broadway.
EAST ORANGE, Essex County.
Arcularius, Philip E., M.D., 52 Chestnut Street.
Bunn, Frank C., M.D., 139 Greenwood Avenue.
Groves, Charles A., M.D., 303 Main Street.
West, Edwin, M.D., 6 North Walnut Street.
ELIZABETH, Union County.
Brown, Stanley R., M.D., 287 North Broad Street.
ENGLEWOOD, Bergen County.
Best, George B., M.D.
HACKENSACK, Bergen County.
Adams, Charles F., M.D., 229 Union Street.
Harris, Nelson A., 339 Union Street.
HADDONFIELD, Camden County.
Williams, Franklin E., M.D., 8 West Main Street.
Broesser, Henry V., 716 Washington Street.
HOBOKEN, Hudson County.
Clausen, Bernard, M.D., 736 Garden Street.
Nicholas, W. E., M.D., 723 Washington Street.
Rabe, Jr., Rudolph F., M.D., 26 Columbia Terrace, Station I.
IRVINGTON, Essex County.
Bruce, Ida Norris, M.D., 1156 Springfield Avenue.
JERSEY CITY, Hudson County.
Everett, Ambrose S., M.D., 37 Garrison Avenue.
Fletcher, Zachary P., M.D., 23 Cottage Street.
Hoffman, James, M.D., 461 Jersey City.
Klein, A. Katharine, 172 Bowers Street.
Nevin, J. Lawrence, M.D., 158 Bowers Street.
Opdyke, Levings A., M.D., 55 Clinton Avenue.
MADISON, Morris County.
Scarborough, Charles W., M.D., 19 Wilmer Place.
MATAWAN, Monmouth County.
Straugn, Clinton Clement, M.D.
MONTCLAIR, Essex County.
Butler, Clarence W., M.D., 35 Fullerton Avenue South.
Foster, Herbert W., M.D., 27 South Fullerton Avenue.
Geddes, Annie Lowe, M.D., 12 S. Fullerton Avenue.
MORRISTOWN, Morris County.
Connett, George Cramer, M.D., 45 Washington Street.
Uebelacker, Arman E., M.D., 109 South Street.

NEW JERSEY—Continued

MOUNT HOLLY, Burlington County.
Branin, John W., M.D., 33 Washington Street.
MULLACA, Gloucester County.
Carr, Henry H., M.D.
NEWARK, Essex County.
Baldwin, Edward Hill, M.D., 77 Clinton Avenue.
Dennis, Laban, M.D., 30 Central Avenue.
Harman, George W., M.D., 900 Broad Street.
Muller, Joseph H., M.D., 133 Littleton Avenue.
Sleght, B. H. B., M.D., 31 Lincoln Park .
Wintsch, Carl Herman, M.D., 271 Fairmount Avenue.
NEW BRUNSWICK, Middlesex County.
Applegate, G. T., M.D., 25 Livingston Avenue.
ORANGE, Essex County.
Moffat, Edgar V., M.D., 476 Main Street.
Richard, George Herbert, M.D., 30 Highland Avenue.
Wakeley, William A., 420 So. Main Street.
PASSAIC, Passaic County.
Church, Charles A., M.D., 128 Prospect Street.
DeBaun, Edwin, M.D., 142 Main Street.
PATERSON, Passaic County.
Carr, Ada, M.D., 125 Vreeland Avenue.
Ekinys, Frank T., M.D., 197 Simmons Street.
Drury, Alfred, M.D., 122 Broadway.
Kinne, Porter S., M.D., 9 Church Street.
Kinne, Theodore Y., M.D., 9 Church Street.
Vreeland, Frank Dinwiddie, M.D., 316 Broadway.
Willard, Harry Sterns, M.D., 197 Ellison Street.
PLAINFIELD, Union County.
Davis, Thomas S., M.D., 603 Park Avenue.
Rushmore, Edward, M.D., 429 Park Avenue.
Cooley, Justus H., M.D., Somerset Avenue.
PRINCETON, Mercer County.
Kline, Andrew K., M.D.
RED BANK, Monmouth County.
Garrison, Biddle Hiles, M.D., 23 Monmouth Street.
RIDGEWOOD, Bergen County.
Ockford, George M., M.D., 36 Oak Street.
SUMMIT, Union County.
Burling, J., M.D.
VINELAND, Cumberland County.
Foote, Theodore, M.D., 636 Wood Street.
WASHINGTON, Warren County.
McKinstry, Frank P., M.D.
WEST HOBOKEN, Hudson County.
McClellan, David, M.D., 104 Clinton Avenue.
WOODBURY, Gloucester County.
Campbell, Duncan, M.D.
Parker, T. Elwood, M.D.

NEW YORK

ADAMS, Jefferson County.
Nickelson, W. H., M.D., A. D. Ripley Block.
ALBANY, Albany County.
Cox, Edward Gilbert, M.D., 261 State Street.
Cox, Frederick Joseph, M.D., 109 State Street.
Cox, George A., M.D., 80 S. Swan Street.
Dowling Joseph Ivimey, M.D., 233 State Street.
Gorham, George E., M.D., 214 State Street.
Milbank, William E., M.D., 111 State Street.
Nead, William M., M.D., 205 State Street.
Van Loon, Arthur Burton, M.D., 50 Eagle Street.

NEW YORK—Continued

ATTICA, Wyoming County.
Gifford, Willis B., M.D.
BALLSTON SPA, Saratoga County.
Royal T. Cook, M.D., 101 Milton Avenue.
BATAVIA, Genesee County.
Hutchins, Horace S., M.D.,
Le Seur, John Wesley, M.D.
BELMONT, Alleghany County.
Hardy, William Jones, M.D.
Paul, William Kendall, M.D.
BENSONHURST.
Bartell, G. W., M.D.
BINGHAMTON, Broome County.
Bailey, De Witt P., M.D., 507 Chenango Street.
Corwin, Elizabeth, M.D., 104 Main Street.
Jenkins, George Hamilton M.D., 139 Main Street.
Martin, Lynn A., M.D., 74 Exchange Street.
Snyder, Edward E., M.D.
Ward, Charles Austin, M.D.
BROOKLYN, Kings County (New York City).
Allen, Herbert C., M.D., 310 Clermont Avenue.
Aten, William Hy., M.D., 100 Greene Avenue.
Baker, Jennie Van Holland, M.D., 512 Bedford Avenue.
Baylies, B. L. B., M.D., 418 Putnam Avenue.
Bierbauer, Bruno W., M.D., 47 Pierrepont Street.
Blackman, William W. M.D., 519 Clinton Avenue.
Bormann, Alfred, M.D., 271 Putnam Avenue.
Brown, Charles A., M.D., 155 Halsey Street.
Brownell, DeEtte, M.D., Memorial Hospital.
Bryant, William Cullen, M.D., 64 Greene Avenue.
Butler, William M., M.D., 507 Clinton Avenue.
Chapin, Edward, M.D., 21 Schermerhorn Street.
Cort, Lottie A., M.D., 89 Division Avenue.
Dickie, Perry, M.D., 17 Schermerhorn Street.
Eliott, Amos H., M.D., 480 Monroe Street.
Fincke, Bernhardt, M.D., 122 Livingston Street.
Fiske, Edwin Rodney, M.D., 140 Dean Street.
Fiske, William M. L., M.D., 140 Dean Street.
Given, James B., M.D., 463 Ninth Street.
Hasbrouck, Everett, M.D., 410 Ninth Street.
Hopper, Magnus Tate, M.D., 46 So. Oxford Street.
Jeffery, George Clinton, M.D., 343 Jefferson Avenue.
Johnston, Charles L., M.D., 467 Vanderbilt Avenue.
Keep, J. Lester, M.D., 460 Clinton Avenue.
Knapp, Herbert J., M.D., 287 So. Fifth Street.
Lazarus, George F., M.D., 10 Caton Avenue.
Lines, Mary Louise, M.D., 344 Washington Avenue.
Lutze, Frederick H., M.D., 212 Keap Street.
Minton, Henry Brewster, M.D., 165 Joralemon Street.
Moffat, John L., M.D., 1136 Dean Street.
Monmonier, Julius L., M.D., 480 Classon Avenue.
Muncie, Libbie Hamilton, M.D., 119 Macon Street.
Pierron, Henry J., 438 Greene Street.
Pierson, William Horton, M.D., 101 McDonough Street.
Rankin, John E., 1185 Dean Street.
Richardson, B. M., M.D., 151 Milton Street.
Ritch, Orando S., M.D., 337 Macon Street.
Robinson, Nathaniel, M.D., 89 Halsey Street.
Schall, John H., M.D., 141 St. Mark's Avenue.
Schenck, Herbert Dana, M.D., 241 McDonough Street.
Simmons, Daniel, M.D., 1188 Dean Street.
Simon, Samuel H., M.D., 195 Garfield Place.

NEW YORK—Contii

Smith, Sidney E., M.D., 77 Arlington Aven
Talmage, Samuel, M.D., 22 Schermerhorn S
Von Der Luhe, Amelia D. F., M.D., 801 Dr
Van Schoonhoven, Cornelius S., M.D., 106
Warner, Alton G., M.D., 19 Schermerhorn
Wiggins, Theodore C., M.D., 12 Verona Pl
Winchell, Walter B., M.D., 137 Berkeley P

BUFFALO, Erie County.
Baethig, Henry, M.D., 350 Pennsylvania S
Chadwick, John Gartside, M.D., 382 Frank
Cook, Joseph T., M.D., 636 Delaware Ave
Erb, Peter, M.D., 32 Palace Arcade.
Lewis, F. Park, M.D., 454 Franklin Stree
Lewis, Frederick Daniel, M.D., 188 Frankli
Martin, Truman J., M.D., 245 North Stree
Maycock, Burt J., M.D., 33 Allen Street.
Moseley, George Thomas, M.D., 202 Delawa
Seaman, Clayton Welch, 232 Hoyt Street.
Stearns, Geo. R., M.D., 201 Linwood Avenu
Stumpf, Daniel B., M.D., 693 Ellicott Stree
Wage, John F., M.D., 414 Seneca Street.
Wilcox, De Witt G., M.D., 597 Elmwood A

CANDOR, Tioga County.
Holly, Eugene DeAlton, M.D., Owego and

CANTON, St. Lawrence County.
Williams, Frank Fay, M.D., 76 Main Stre

CARTHAGE, Jefferson County.
Robinson, Franklin E., M.D.
Simonds, E. A., M.D.

CHAUTAUQUA, Chautauqua County.
Robbins, A. Jerome, M.D. (also Mayville).

COHOES.
Kenney, Harriet E., M.D., 508 Saratoga S

CORNWALL-ON-HUDSON.
Humphrey, Frank M., Box 342.
Chandler, D. H., M.D.

CORTLAND, Cortland County.
Nash, Eugene B., 28 Clinton Avenue.
Spalding, Julia H., M.D., 39 N. Main Stre

DELHI, Delaware County.
Schumann, Carl, M.D.

DEPOSIT, Broome County.
Mead, Walter Glover, M.D.

DUNKIRK, Chautauqua County.
Rieger, Joseph, M.D., 9 W. Fourth Street.

EAST BLOOMFIELD, Ontario County.
Partridge, Barton Scott, M.D.

ELMIRA, Chemung County.
De Camp, Frank Hurd, 410 William Street.
Eddy, Ermina Catharine, M.D., 500 William

FAIRPORT, Monroe County.
Clapp, Wesley F., M.D.

FREDONIA, Chautauqua County.
Couch, Asa S., M.D.

FRIENDSHIP, Alleghany County.
Williams, Bemesley, M.D.

GENESEO, Livingston County.
Southall, Edw. W., M.D.

GENEVA, Ontario County.

GLENS FALLS, Warren County.
Birdsall, Stephen T., M.D.
Smith, Melvin D., M.D., 47 Ridge Street,

NEW YORK—Continued

GLOVERSVILLE, Fulton County.
Garnsey, William Smith, M.D., 93 W. Main.
GOSHEN, OrangeCounty.
Barnard, Esther S., "Interpoises."
Seward, Frederick W., M.D., Main Street.
Seward, Frederick W., Jr., M.D., Main Street.
GOWANDA, Cattaraugus County.
Arthur, Daniel H., M.D.
Potter, Clarence Albert, M.D.
Rome, Alice E.
Zwetsch, John D., M.D., Main Street.
HAMILTON, Madison County.
Gifford, Gilbert L., M.D.
Wilcox, George W., M.D., Eaton Street.
HONEOYE FALLS, Monroe County.
White, Benjamin R., M.D.
HOOSICK FALLS, Rensselaer County.
Putnam, William B., M.D., 34 Wilder Avenue.
HUNTINGTON, Suffolk County.
Sword, George P., M.D.
ITHACA, Tompkins County.
Beanman, Charles P., M.D.
Besemer, Howard B., M.D., 232 S. Albany Street.
Bessemer, Martin, M.D., 116 East State Street.
Crum, Harry Herbert, M.D., 212 Hazen Street.
Franklin, Edw. D., 103 Quarry Street.
JAMAICA, Queens County.
Belden, Charles K., M.D., 28 Clinton Avenue.
Macfarland, Ralph L., M.D., 53 Clinton Avenue.
JAMESTOWN, Chautauqua County.
Ormes, Francis D., M.D.
Rice, Alvin B., M.D., 117 Fairmount Avenue.
KEESEVILLE, Essex County.
Pope, Willis G., M.D.
LEROY, Genesee County.
Skinner, Scott W., M.D.
LIBERTY, Sullivan County.
Deady, Howard Percy, M.D.
LOCKPORT, Niagara County.
Hurd, S. Wright, M.D., 73 Main Street.
MAMARONECK, Westchester County.
Hall, Mathew J., M.D.
Montgomery, R. W., M.D.
MAYVILLE.
Robbins, A. Jerome.
MEDINA, Orleans County.
Damon, G. J.
Swett, Emily F., M.D.
MIDDLETOWN, Orange County.
Ashley, Maurice C., M.D.
Barrus, Clara, M.D.
Brewster, Geo. F., M.D.
Everett, Edward A., M.D., State Hospital.
Francisco, David E., M.D., State Hospital.
Mitchell, Roy E., M.D.
Woodman, Robert C., M.D., State Hospital.
MOUNT KISKO,
Brown, E. W., M.D.
MOUNT VERNON, Westchester County.
Ives, Nathaniel Holmes, 145 Second Avenue.
Jones, Henry C., M.D., 220 S. First Avenue.

NEW BRIGHTON, Richmond County.
Conklin, Frances C. Donovan, M.D., 48 Westervelt Avenue.
NEWBURGH, Orange County.
Jacobson, Frank Aikens, 209 Grand Street.
Mitchell, John J., M.D.
NEW ROCHELLE, Westchester County.
Finch, Edwin W., M. D., Center Avenue and Prospect Street.
Roberts, David J., M.D.
NEW YORK, New York County.
Allen, J. Wilford, M.D., 110 W. Twelfth Street.
Allen, Paul, M. D., 3 E. Forty-eighth Street.
Ambler, John Edgar, M.D., 134 E. Nineteenth Street.
Arschagouni, John, M.D., 727 Lexington Avenue.
Austin, A. Eugene, M.D., 17 E. Sixty-sixth Street.
Bagg, Clinton L., M.D., 26 West Forty-sixth Street.
Baldwin, Jared G., M.D., 8 E. Forty-first Street.
Barker, Caleb, Jr., M. D., 130 W. Ninety-third Street.
Baruch, Solomon, M. D., 1135 Lexington Avenue.
Bassett, John S., M.D., 11 W. Thirty-first Street.
Beckwith, S. R., M.D., 170 Fifth Avenue.
Bennett, James A., M.D., 4 Irving Place.
Berghaus, Alexander, M.D., 138 Sixty-first Street.
Bingham, Anson Holden, M.D., 113 W. Eighty-seventh Street.
Bishop, William H., M.D., 56 W. Forty-eighth Street.
Bissell, Arthur F., M. D., 80 Wall Street.
Bond, Mary E., M.D., 122 Lexington Avenue.
Boyle, Charles C., M.D., 49 W. Thirty-seventh Street.
Boynton, Frank H., M.D., 36 W. Fiftieth Street.
Brigham, H. C., "The Barnard," Cent. P. & 71st.
Broeser, Henry V., M.D., Flower Hospital, Av. A and Sixty-third St.
Brown, M. Belle, M.D., 30 W. Fifty-first Street.
Buchanan, T. Brysdale, M.D., 328 West Twenty-fourth Street.
Buckholz, Louise Z., M. D., 73 East Eighth Street.
Carleton, Bukk G., M.D., 75 W. Fiftieth Street.
Charles, Emily C., M.D., 51 W. 127th Street.
Chase, J. Oscoe, M.D., 214 E. Fifty-third Street.
Clark, Byron G., M.D., 25 W. Seventy-fourth Street.
Clawson, Frank A., M.D.
Coleman, Daniel E. S., M.D., 70 W. 171st Street.
Crump, Walter Gray, M.D., 693 Madison Avenue.
Danforth, Loomis L., M.D., 59 W. Fifty-second Street.
Davies, Thomas F., M.D., 359 W. 116th Street.
Davis, John E. L., M.D., 743 Madison Avenue.
Deady, Charles, M.D., 151 W. Seventy-third Street.
Dearborn, Frederick Myers, M.D., 146 West Fifty-seventh Str
Dearborn, Henry M., M.D., 146 W. Fifty-seventh Street.
Delabarre, Walter E., M. D., 222 W. Fifty-ninth Street.
Demarest, John H., M.D., 59 W. 126th Street.
Dieffenbach, William H., M.D., The "Rockingham," S. I
way and Fifty-sixth Street.
Dillingham, Thomas Manley, M.D., 8 W. Forty-ninth Stree
Dillow, George Morris, M.D., 223 W. Fifty-seventh Street.
Doremus, Widmar E., M.D., Flower Hospital.
Doughty, Francis E., M.D. 512 Madison Avenue.
Dowe, Frank LeC., M.D., S. Boulevard and Briggs Aven
Dowling, John W., M.D., 116 W. Forty-eighth Street.
Dunlevy, Rita, M.D., 328 W. Fifty-seventh Street.
Edwards, Mary L., M.D., 19 West Forty-sixth Street.
Ermentraut, John P., M.D., 44 Seventh Street.
Fobes, Joseph Henry, M.D., 2 Riverview Terrace.
Garrison, John B., M.D., 115 E. Seventy-first Street
Gennenrich, Charles, M.D., 181 E. Sixty-fourth Stree

NEW YORK—Continued

Gilbert, Charles E., M.D., 323 W. Twenty-third Street.
Guernsey, Egbert, M.D., 180 W. Fifty-ninth Street.
Hallett, G. DeWayne, M.D., 132 W. Eighty-first Street.
Hamlin, Frederick William, M.D., 130 W. Forty-eighth Street.
Hardy, Samuel Olin, M.D., 912 West End Avenue.
Harrison, H. A., 201 E. Twenty-third Street.
Hathaway, Henry S., M.D., 146 W. Ninety-second Street.
Helfrich, Charles H., M.D., 42 Fifth Avenue.
Helmuth, William Tod, M.D., 26 E. Sixty-second Street.
Hertz, Sue Emma, M.D., 102 W. Forty-fourth Street.
Hill, Emily L., 250 W. Ninety-fourth Street.
Higbie, Annie S., 177 W. Seventy-third Street.
Hollister, Frederick K., M.D., 521 Madison Avenue.
Honan, William Francis, M.D., Sherman Square Hotel.
House, Wallace Belding, M.D., 203 W. 113th Street.
Howard, Clarence C., M.D., 57 West Fifty-first Street.
Howe, J. Morgan, M.D., 12 West Forty-sixth Street.
Hoyt, Eugene F., M.D., 39 W. Fifty-eighth Street.
Hunt, Dwight B., M.D., 41 W. Eighty-second Street.
Hutchinson, John, M.D., 78 E. Fifty-fifth Street.
Jenks, Edw. B., 134 E. Seventieth Street.
Keep, Caroline J. Yeomans, M.D., 308 W. Thirty-sixth Street.
Kellogg, Edwin M., M.D., 155 Madison Avenue.
Kerr, H. P., 352 W. 117th Street.
King, William Harvey, M.D., 64 W. Fifty-first Street.
Laidlaw, George Frederick, M.D., 58 W. Fifty-third Street.
Land, Joseph Foster, M.D., 130 W. 126th Street.
Leal, Malcolm, M.D., 107 W. Forty-eighth Street.
Leao, Francisco Garcia P., M.D., 17 State Street.
Lewis, Henry M., M.D., "Florence," Eighteenth Street and Fourth Avenue.
Lund, Frederic Albert, M.D., 512 Madison Avenue.
Macy, Charles Seely, M.D., 103 W. Seventy-first Street.
Maeder, John G., M.D., 304 E. 120th Street.
McDonald, William O., M.D., 9 W. Sixty-eighth Street.
McDowell, Charles, M.D., 960 Park Avenue.
McDowell, George W., M.D., 542 Fifth Avenue.
McKnight, William C., M.D., 219 W. 135th Street.
McMichael, Arkell R., M.D., 969 Madison Avenue.
McMichael, J. E., M.D., 50 W. Eighty-ninth Street.
Mills, Walter Sands, M.D., 324 W. Eighty-ninth Street.
Miner, Frederick Cohoon, M.D., 1134 Forest Avenue.
Mossman, Nathan A., M.D., St. Andrews Hotel.
Muller, Charles W., M.D., 209 E. Eighty-seventh Street.
Munson, Edwin S., M.D., 16 W. Forty-fifth Street.
Nielson, Howard Stout, M.D., 46 W. Forty-eighth Street.
Norton, Arthur B., M.D., 16 W. Forty-fifth Street.
Nott, Frederick J., M.D., 554 Madison Avenue.
O'Connor, Joseph T., M.D., W. Forty-second Street.
Ogden, Edwin G., M.D.
Ostrom, Homer I., M.D., 42 W. Forty-eighth Street.
Palmer, A. Worrall, M.D., 210 W. Fifty-seventh Street.
Palmer, Miles W., M.D., 235 E. Eighteenth Street.
Pardee, Ensign B., M.D., 74 W. Forty-eighth Street.
Patchen, George H., M.D., 20 W. Fifty-ninth Street.
Pettet, Isabella Margaretta, M.D., 308 E. Fifteenth Street.
Pierce, Willard I., M.D., 64 W. 126th Street.
Porter, Eugene H., M.D., 181 W. Seventy-third Street.
Powell, Milton, M.D., 163 W. Seventy-sixth Street.
Powelson, Arthur P., 351 Lenox Avenue.
Rankin, Egbert G., M.D., 226 Central Park South.
Reynolds, Warren U., M.D., 320 Manhattan Avenue.
Richardson, Arthur A. H., 39 E. Eighty-third Street.

Richardson, Andrew J., M.D., 39 E. Eighty-third Street.
Richardson, George W., M.D., 138 E. Seventy-ninth Street.
Roberts, George W., M.D., "The Cordovia," 170 W. Fifty-ninth Street.
Roper, Fred E., M.D.
Rudderow, Edward Douglas, M.D., 145 W. Eighty-eighth Street.
Russell, H. Everett, M.D., 30 E. Seventy-fourth Street.
Schley, James Montford, M.D., 32 W. Forty-ninth Street.
Scott, William H., M.D., 104 W. Forty-fourth Street.
Seward, John Perry, M.D., 200 W. Seventieth Street.
Shepard, George Andrew, M.D., "The Glenmore," 7th Ave. and 55th St.
Sherman, Le Roy B., M.D., 355 W. Fourteenth Street.
Simonson, J. T., 46 W. Eighty-fifth Street.
Smith, St. Clair, M.D., 25 W. Fiftieth Street.
Stearns, Guy B., M.D., 168 W. Seventy-eighth Street.
Stevens, David D., M.D., 49 W. Eighty-third Street.
Smith, T. Franklin, M.D., 264 Lenox Avenue.
Stewart, George Taylor, M.D., Rutland, Broadway and Fifty-seventh Street.
Stewart, Ralph, M.D., 143 W. Seventy-sixth Street.
Storer, John Hudson, M.D., 30 Edgecombe Avenue.
Swift, Edward P., M.D., 170 W. Eighty-eighth Street.
Teets, Charles E., M.D., 59 W. Thirty-seventh Street.
Thompson, John H., M. D., 36 E. Thirtieth Street.
Thompson, Virgil, M.D., 32 W. Twenty-first Street.
Townsend, Irving, M.D., 62 W. Fifty-first Street.
Tuttle, Edward G., M.D., 61 W. Fifty-first Street.
Tyler, George E., M.D., 113 W. 126th Street.
Van den Burg, William H., M.D., 32 W. Forty-ninth Street.
Vehslage, Samuel H., M. D., 117 W. Forty-third Street.
Ver Nooy, Charles, M.D., 146 W. Sixty-fourth Street.
Wait, Phœbe J. B., M.D., 412 Ninth Avenue.
Wakefield, S. B., M.D., Metropolitan Hospital, Blackwell's Island.
Wetmore, John McE., M.D., 43 W. Fifty-fourth Street.
Wilcox, Sydney F., M.D., 51 W. Fifty-second Street.
Wilder, Louis de V., M.D., 55 W. Thirty-third Street.
Wilson, John E., 23 E. Forty-fifth Street.
Woodward, A. M., M.D., 128 W. Thirteenth Street.

NIAGARA FALLS, Niagara County.
Hodge, William H., M.D., 324 Buffalo Avenue.
Hough, Walter D., M.D., 635 Main Street.

NORTH GRANVILLE, Washington County.
Spoor, David E., M.D.

NORTH TARRYTOWN, Westchester County.
Brown, Edward V., M.D.

NORWICH, Chenango County.
Roper, F. E., M.D., 73 Broad Street.

NORWOOD, St. Lawrence County.
Summer, Charles Oliver, M.D., 4 Park Street.

NYACK, Rockland County.
Couch, Lewis B., M.D.

OGDENSBURG, St. Lawrence County.
Bell, W. N., M.D., 6 Greene Street.

OSWEGO, Oswego County.
Richards, Llewellyn B., M.D.

OWEGO, Tioga County.
Greenleaf, John T., M.D.
Hambin, Frank Milton, M.D., "Glenmary."
Hyde, Louis D., M.D., 239 Main Street.

OXFORD, Chenango County.
Ganow, George J., M.D., 21 Washington Avenue.
Miller, Robert Emmett, M.D.

PANAMA, Chautauqua County.
Young, Albert D., M.D.

NEW YORK—Continued

PATERSON, Putnam County.
Birdsall, Thomas P., M.D.
PEEKSKILL, Westchester County.
Mason, Perley Hugh, M.D., 734 South Street.
Otis, John Calhoun, M.D., 319 Mill Street.
PERRY, N. Y.
Brownell, John M., M.D.
PIKE, Wyoming County.
Andrews, Lemar M., M.D.
PORTCHESTER, Westchester County.
White, John C., M.D., N. Main Street.
POUGHKEEPSIE, Dutchess County.
Lane, Charles E., M.D., 289 Mill Street.
RANDOLPH, Cattaraugus County.
Babcock, Archibald H., M.D.
RICHFIELD SPRINGS, Otsego County.
Ward, Henry A.
ROCHESTER, Monroe County.
Adams, Reuben A., M.D., 46 North Fitzhugh Street.
Bachman, George A., M.D., South Avenue.
Biegler, Joseph A., M.D., 58 South Clinton Street.
Bissell, Elmer Jefferson, M.D., 75 South Fitzhugh Street.
Button, Lucius L., M.D., 45 South Clinton Street.
Collins, Newton M., M.D., 43 East Avenue.
Graham, M. E., M.D., 1100 South Avenue.
Haywood, Julia F., M.D., 612 West Avenue.
Hoyt, Herbert W., 75 South Fitzhugh Street.
Jewett, D. B., M.D., 224 Alexander Street.
Keegan, William A., M.D., 40 South Clinton Street.
Lee, John Mallory, M.D., 121 Lake Avenue.
Parsons, Thomas, M.D., 213 Alexander Street.
Rambo, Wm. S., M.D., 43 Sophia Street.
Ricker, Marcena S., M.D., 58 Lorimer Street.
Sumner, Charles R., M.D., 33 South Clinton Street.
Wolcott, Edwin H., M.D., 57 South Union Street.
ROME, Oneida County.
Southwick, Augustus B., M.D., 107 West Liberty Street.
SALT POINT, Dutchess County.
Angell, Milton H., M.D.
SARANAC LAKE, Franklin County.
Hallock, J. Henry, M.D.
SCHENECTADY, Schenectady County.
Faust, Louis, M.D.
Faust, William P., M.D., 22 Jay Street.
SYRACUSE, Onondaga County.
Candee, J. Willis, M.D., 501 Fayette Park.
Hartman, W. Louis, M.D., "University" Building.
Keeler, E. Elmer, M.D., 423 East Jefferson Street.
Kinne, Arthur B., M.D., 410 Fayette Park.
Kinne, E. Olin, M.D., 516 Warren Street.
Sheldon, Jay W., M.D., 501 Fayette Park.
Sherwood, Bradford Wyckoff, M.D., 1117 S. Salina Street.
THESA.
Snell, Wm. M.
TROY, Rensselaer County.
Bloss, Jabez P., M.D., 108 Second Street.
Coburn, Edward S., M.D., 91 Fourth Street.
UTICA, Oneida County.
Alliaume, Charles Ed., M.D., 221 Genesee Street.
Bruce, Augustus H., M.D., Gardner Building.
Dean, L. W., M.D., Gardner Building.
Haines, Charles Ter Bush, M.D., 48 Gardner Building.

Terry, Marshall O., M.D., 196 Genesee Street.
Watson, William H., M.D., 270 Genesee Street.
WALTON, Delaware County.
Mowbray, J. Lincoln, M.D., 9 Benton Avenue.
St. John, A. H., M.D.
WARSAW, Wyoming County.
Slaught, James E., M.D.
WARWICK, Orange County.
Beattie, Joseph Hoyt.
Cummins, Frank M., M.D.
WATERVILLE, Oneida County.
Leeds, Frank R., M.D., Main Street.
WESTFIELD, Chautauqua County.
Seymour, George W., M.D., North Portage, No. 40.
WHITE PLAINS, Westchester County.
Birch, Charles E., M.D.
Haight, Alfred M., M.D., 19 N. Broadway.
Kingsley, O. D., M.D., 19 N. Broadway.
YONKERS, Westchester County.
Keith, Horace G., M.D., 317 South Broadway.
Phillips, R. Oliver, M.D., 257 Warburton Avenue.
Trotter, Richard R., M.D., 189 Warburton Avenue.

NORTH CAROLINA.

PINE BLUFF.
Grant, Wm. H., M.D.

NORTH DAKOTA.

FARGO, Cass County.
Vidal, James W., M.D., 416 Eighth Street South.
JAMESTOWN, Stutsman County.
De Puy, Richard G., M.D.
LEONARD, Cass County.
Hobart, W. F., M.D.

OHIO

ADA, Harding County.
Ames, Charles S., M.D.
AKRON, Summit County.
Carter, Rollin Bert, M.D., 106 Adalph Avenue.
Gauffield, Edwin J., M.D., 518 S. Market.
Kapp, Michael Wm., 32 Central Office Building.
Wilson, William, M.D., 121 Bates Street.
ALLIANCE, Stark County.
Haggart, George Benjamin, M.D., 153 East Main Street.
ASHTABULA, Ashtabula County.
Griggs, O. P., 42 Center Street.
Siegfried, John P., M.D.
ATHENS.
Higgins, Jno. M., M.D., 2 Mulberry Street.
BELLEFONTAINE, Logan County.
Wilson, Joseph H., M.D.
Young, Jas. W.
BOWLING GREEN, Wood County.
Whitehead, J. H., M.D., 43 Church Street.
CADEZ, Harrison County.
Lyons, Matilda Jamison, M.D.
CAMBRIDGE, Guernsey County.
Wells, Levy C., M.D., 719 Wheeling Avenue.
CANTON, Stark County.
Rizer, Alfred L., 318 North Cleveland Avenue.
CARDINGTON, Morrow County.
White, Florence R. Smith, M.D.

OHIO—Continued

CHILLICOTHE, Ross County.
Gibbs, Frank L., M.D., 88 W. Second.
Hoyt, Charles, M.D.
CHIPPEWA LAKE, Medina County.
Dillman, Daniel, M.D.
CHICAGO, Huron County.
Metcalf, Hiram Hulbert, M.D.
CINCINNATI, Hamilton County.
Brickley, Laura C., M.D., Chase and Hamilton Avenues.
Buck, Jirah D., M.D., 124 West Seventh Street.
Crank, C. D., M.D., 106 Auburn Avenue.
Geiser, S. R., M.D., 770 N. Crescent Avenue.
Geohegan, William A, M.D., 918 Hawthorne Avenue, Price's Hill.
Georgi, Sophia E., M.D., 1634 Pullan Sta. A.
Kirk, Ellen Maria, M.D., 107 Odd Fellows Temple.
Kilgour, Peter T., Hamilton Avenue, Cincinnati.
Leevey, Marian E. Kyle, M.D., 513 W. Seventh Street.
McCormick, A. L., M.D., 3110 Woodburn Avenue.
Meade, Stephen Johnson D., M.D., 18 W. Seventh Street.
Minon, Mary E., M.D., Burch Avenue, Hyde Park.
Pauly, C. A., M.D., Union Trust Building.
Phillips, Lincoln, M.D., 1104 McMillan Street.
Price, Wm. H., M.D., 820 Mt. Hope Avenue.
Reid, Robert G., M.D., Union Trust Building.
Stewart, Thos. M., M.D., 704 Elm Street.
Walton, Charles E., M.D., 716 John Street.
Wiggers, Henry H., M.D., 529 Everett Street.
CIRCLEVILLE, Pickaway County.
Peters, Wilson L., M.D.
CLEVELAND, Cuyahoga County.
Adams, Ernest O., 176 Euclid Avenue.
Baldinger, Arthur F., M.D., 687 The Arcade.
Barton, Pauline Heidet, M.D., Rose Building.
Baxter, Harris H., M.D., 275 Prospect Street.
Beckwith, D. H., M.D., 94 Dorchester Avenue.
Biggar, Hamilton F., M.D., 260 Euclid Avenue.
Biggar, H. F., Jr., 160 Euclid Avenue.
Bishop, Hudson D., M.D., 143 Euclid Avenue.
Chapman, Harriet V., 3809 Euclid Avenue.
Cummer, Robt. J., 734 Rose Building.
Frost, Herbert L., M.D., 10 Hayward.
Goddard, John R., 684 Hough Avenue.
Hendrix, John Oliver, Castle Building.
Handmacher, David, 2260 Broadway.
Hoover, Julia E., 145 Taylor Street.
Horner, J. Richey, M.D., 275 Prospect Street.
Hunt, Ella Grace, M.D., 608 West Eighth Street.
Jend, Gustav Adolph, 1194 Sayne Avenue.
Jewitt, Edward H., M.D., 484 Arcade.
Jones, Gaius J., M.D., 310 Caxton Building.
Jones, Geo. W., 310 Caxton Building.
Kimmel, Benj. B., M.D., 822 Rose Building.
Kraft, Frank, M.D., 57 Bell Avenue.
Lewis, Fred Lyman, 1854 Pearl Street.
Lytle, Joseph Allgyer, 718 Rose Building.
Nobles, Newmann T. B., 275 Prospect Street.
Palmer, Owen A., M.D., 773 Republic Street.
Parsons, Katharine, M.D., 914 Prospect Street.
Paterson, William, M.D., 1419 Lorain Street.
Pomeroy, Harlan, M.D., 347 Erie Street.
Quay, George H., M.D., 820 Rose Building.
Quilliams, F. F., M.D., 1821 Euclid Avenue.

OHIO—Continued

Richardson, Francis Newton, M.D., 83 Jennings Avenue.
Roper, Pulaski B., M.D., 822 Rose Building.
Rust, Edwin G., M.D., 29 Euclid Avenue.
Sanders, John C., M.D., 608 Prospect Street.
Schneider, Adolph Benedict, M.D., 520 Rose Building.
Stephens, James A., M.D., 260 Euclid Avenue.
Stone, Martha M., M.D., 914 Prospect Street.
Thego, Wm. Edgar, 1463 Cedar Avenue.
Trego, Wm. E., 1463 Cedar Avenue.
Turrill, Geo. Edward, 176 Euclid Avenue.
Van Norman, H. B., M.D., 289 Pearl Street.
Waite, Kent B., M.D., 710 Rose Building.
Waltz, Alvin L., 526 Prospect Street.
Phillips, Wm. H., M.D., 630 Rose Building.
Wilkins, Geo. R., 568 W. Madison Avenue.
Wood, James C., M.D., 820 Rose Building.

COLUMBUS, Franklin County.
Barbee, Benjamin I., M.D., 60 East Broad Street.
Carpenter, Willard B., M.D., 657 North High Street.
Connell, Robert Wilkie, M.D., 427 East Long Street.
Hunt, Maurice P., M.D., 200 East State Street.
Schulze, Carl A., M.D., 49 East Main Street.
Sigrist, Christopher W., M.D., 308 Collins Avenue.
Silbernagel, Charles Edward, M.D., 1033 North High Street.

CONNEAUT.
Cole, Geo. Harvey, 311 Main Street.

COVINGTON, Miami County.
Rosenberger, Abraham S., M.D.

DAYTON, Montgomery County.
Bittinger, Frank D., M.D., 23 West Fourth Street.
Laughlin, T. Livezery, M.D., 527 River Street.
Palmer, Harry E., 226 North Main Street.
McCann, T. Addison, M.D., 115 N. Perry Street.
Murphy, Frank Wellington, M.D., 38 S. Ludlow.
Webster, Frank, M.D., 700 Reibold Building.
Welliver, James Everson, 111 N. Jefferson.

DELAWARE, Delaware County.
Pulford, William Henry, M.D., 88 N. Sandusky Street.

DOYLESTON, Wayne County.
Stepfield, Alexander E., M.D.

ELYRIA, Lorain County.
Baldwin, Henry D., M.D.

FINDLAY, Hancock County.
Barnhill, Tobias G., M.D., 208 South Main Street.

GALION, Crawford County.
Marsh, Guy C., M.D., 209 South Market Street.

GREENFIELD, Highland County.
Goldsmith, Alfred E., M.D.

HAMILTON, Butler County.
Overpeck, James W., M.D., Third and Dayton Streets.
Schell, Samuel M., 110 N. Third Street.

HELENA, Sandusky County.
Crismore, John M., M.D.

HICKSVILLE, Defiance County.
Lanning, Willet Scott, M.D.

JERRY CITY, Wood County.
Wollam, J. Frank, M.D.

LANCASTER, Fairfield County.
Hershberger, Joseph P., M.D., 351 East Main Street.
Junkerman, Charles F., 405 N. Broad.

MANSFIELD, Richland County.
Ecki, Simon T., M.D., 365 Park Avenue W.

OHIO—Continued

MARIETTA, Washington County.
Curtis, Harry N., M.D., 314 Second Street.
Curtis, Helen Endora, 314 Second Street.
McCleary, Jos. R., M.D., 224 Putnam Street.
MARION, Marion County.
Sawyer, Charles E., M.D.
MEDINA, Medina County.
Damon, G. J., M.D.
MIDDLETOWN, Butler County.
Reed, Thomas E., M.D.
MOUNT VERNON, Knox County.
Arndt, George O., M.D., 123 East High Street.
Conrad, Chas. K., 18 East Vine Street.
De Camp, Frank Hurd, 410 William Street.
Eggelston, Eugene R., M.D., 100 North Main Street.
NELSONVILLE, Athens County.
Welch, Chas. F., M.D., 12 West Columbus Street.
NEWARK, Licking County.
Mitchell, John A., M.D., 69 Third Street.
NEW METAMORAS, Washington County.
Riley, C. T., M.D.
NEW PHILADELPHIA, Tuscarawas County.
Sigrist, Philip H., M.D., East High Street.
NILES, Trumbull County.
Claypool, John B., 156 Furnace Street.
Gaston, Sarah P., Main Street.
NORWALK, Huron County.
Simmons, S. E., M.D., 82 West Main Street.
OBERLIN, Lorain County.
Bissell, Fred C., 13 North Mair Street.
Hawkins, Ellen F., M.D., 31 West College Street.
Pyle, Harold Ward, M.D., 5 West College Street.
OXFORD, Butler County.
Munns, Charles O., M.D.
PIQUA, Miami County.
Fahnestock, Joseph C., M.D.
PLYMOUTH, Richland County.
Fackler, Joshua M., M.D.
PORTSMOUTH, Scioto County.
Gault, Wm. Edward, M.D., 96 East Second Street.
PROSPECT, Marion County.
Lunger, Justus S., M.D., East Water Street.
ROCK CREEK, Ashtabula County.
Morrison, Frank A., M.D., 6 South Main Street.
SALEM, Columbiana County.
Church, T. T., M.D., 31 Lincoln Avenue.
SANDSUKY, Erie County.
Gillard, Edwin, M.D., 423 Columbus Avenue.
Morley, Frank W., Washington Avenue.
SIDNEY, Shelby County.
Beebe, Henry E., M.D.
Ferree, Judson A., M.D.
Redfish, Albert W., M.D.
SOUTH EUCLID, Cuyahoga County.
Rowland, Justin E., M.D.
SOUTH CHARLESTON, Clark County.
Whittaker, Harry O., M.D.
SPRINGFIELD, Clark County.
Grant, George D., M.D., 16 West High Street.
House, Robert B., M.D., 108 East High Street.
Miller, Harry T., 113 East High Street.

OHIO—Continuec

ST. MARYS, Auglaize County.
Pintler, Hiram E., M.D.
Shuffleton, Frank A., 209 West High Street.
STRUTHERS, Mahoning County.
Wallace, C. R., M.D.
TOLEDO, Lucas County.
Barnum, Arthur T., M.D., 2524 Collingwood
Butman, Emma W., M.D., 1758 Erie Street.
Claypool, Albert, M.D., 2217 Fulton Street.
Hays, Emma L. Boise, M.D., 2236 Monroe St
Humphrey, William A., M.D., 2235 Maplewood
Maxwell, Lewis K., M.D., 1615 Twenty-secon
Nicholas, Geo. D., 330 Second Street.
Rees, Owen, M.D., 314 Erie Street.
Watson, Carl, M.D., "The Vendome."
Watts, William, M.D., 339 Huron Street.
Zbinden, Christian, 431 Nebraska Avenue.
TROY, Miami County.
Means, J. W., M.D.
UNEAPOLIS, Auglaize County.
Hurlbut, John W., M.D., Ohio Street.
URICHSVILLE, Tuscarawas County.
Cash, Nathan, M.D., 69 Third Street.
XENIA, Greene County.
Hewell, W. S., O. S. and S. O. Home.
WARREN, Trumbull County.
Sherwood, H. A., M.D.
WASHINGTON C. H., Fayette County.
Estep, Charles S., M.D.
Hodson, Geo. Stanton.
XENIA, Greene County.
Hewell, W. S., O. S. and S. O. Home.
YOUNGSTOWN, Mahoning County.
Blaine, William M., M.D.
Green, Arba S., 307-8 Federal Building.
Hills, Howard Bakewell, M.D.
ZANESVILLE, Muskingum County.
Smith, Francis A., M.D., 18 South Fourth S

OKLAHOMA TERRI

HARRISON.
Richert, Peter.
WOODWARD.
Sawyer, Eugene W., M.D.

OREGON.

MCMINNVILLE.
McNeil, Alonzó L., M.D.
PORTLAND, Multnomah County.
Jefferds, Henry Clark, M.D., Dekum Buildin
Miller, Byron E., M.D., "The Dekum."
Nichols, Annie S., M.D., "The Dekum."

PENNSYLVANI

ALLEGHENY, Allegheny County.
Calhoun, John Charles, M.D., 803 Arch Stre
Nicholson, Harry Schuyler, 621 Arch Street
Small, Stanley G., M.D., 152 Taggart Stree
Wallace, Homer Dawson, 214 Laycock Stree
White, Roland T., M.D., 914 Western Avenu
Willard, Lewis Henry, M.D., 236 Western A
ALLENTOWN, Lehigh County.
Biltner, Albert Jacob, M.D., 1036 Hamilton

PENNSYLVANIA—Continued

Hassler, William A., M.D., 105 North Eighth Street.
Kistler, A. L., Ninth and Linden Streets.
Martin, Constantine H., M.D.
Slough, Frank J., M.D.

ALTOONA, Blair County.
Baker, Albert, L., 1400 Twelfth Avenue.
Blackburn, Edwin C., 1421 Eleventh Avenue.
Morrow, Emory H., M.D., 943 Seventeenth Street.

ASHBOURNE.
Van Artsdalen, C., M.D.

BEAVER FALLS, Beaver County.
Moon, Seymour B., M.D., 1314 Eighth Avenue.

BELLVUE.
Cooper, Roy Cummings, Bank Building.

BETHLEHEM, Northampton County.
Garis, Frank A., M.D., 220 South Broad Street.

BLOOMINGTON, Columbia County.
Champlin, Henry William, M.D., 37 West Main Street.

BRADFORD, McKean County.
White, A. Grace, M.D.

BRISTOL, Bucks County.
Weaver, Willis P., M.D., 320 Radcliff Street.

BRYN MAWR, Montgomery County.
Powell, William C., M.D.

CATASAUQUA, Lehigh County.
Yoder, Daniel, M.D.

CHAMBERSBURG, Franklin County.
Bowman, Benjamin, M.D.
Crawford, Kathrine, M.D., 131 North Main Street.

CHESTER, Delaware County.
Crowther, Isaac, M.D., 100 Madison Street.
Hubbard, Charles H., M.D., 425 Broad Street.
Maddux, Daniel P., M.D., Eighth and Madison Streets.
Mercer, Robert P., M.D., 223 West Third Street.
Perkins, Charles W., M.D., 403 Broad Street.
Powell, Franklin, M.D., 241 East Fifth Street.
Webster, George C., M.D., 305 West Seventh Street.

COATESVILLE, Chester County.
Pratt, John W., M.D.

COLLEGEVILLE, Montgomery County.
Krusen, Edward A., M.D.

COLUMBIA, Lancaster County.
Taylor, Wm. Gardiner, M.D., 216 Locust Street.

DOYLESTOWN.
Pursell, Jas. P.

DU BOIS, Clearfield County.
Gann, George Willard, M.D.

EASTON, Northampton County.
Detwiller, John J., M.D.
Seibert, Walter W., M.D., 43 South Fourth Street.
Seibert, William A., M.D.

EMANUS, Lehigh County.
Slough, William C. J., M.D.

ERIE, Erie County.
Cranch, Edward, M.D., 109 West Ninth Street.
Gifford, Edward F., M.D., 221 West Eighth Street.
Phillips, Joseph R., 15 East Eighth Street.

FLEETWOOD, Berks County.
Lentz, Levi R., M.D.

FRANKLIN, Venango County.
McBride, Lewis E., 78 Thirteenth Street.

GERMANTOWN, PA.
Leopold, Wm. C., M.D., 310 Crelton Avenue.
GLEN ROCK, York County.
Seitz, William Clinton, M.D.
GREENCASTLE, Franklin County.
Nowell, John F., M.D.
HANOVER, York County.
Everhart, Oliver T., M.D.
Fleagle, Maurice Monroe, M.D., 37 York Street.
HARRISBURG, Dauphin County.
Fager, Charles B., M.D., 120 Walnut Street.
Swartz, J. Ross, M.D., 236 North Third Street.
HATBORO, Montgomery County.
Reading, Thomas, M.D.
HOLLIDAYSBURG, Blair County.
Stitzel, Jonas Wakefield, M.D.
HONESDALE, Wayne County.
Peterson, Pierson B., M.D.
JEANNETTE, Westmoreland County.
Robinson, Clarence G., M.D., 509 Clay Avenue.
JENKINTON, Montgomery County.
Heritage, Alfred C., M.D.
JOHNSTOWN, Cambria County.
Kistler, Horace Edwin, M.D., 313 Main Street.
KANE, McKean County.
Heimbach, James M., M.D., 12 Greeves Street.
KENNETT SQUARE, Chester County.
Johnson, Isaac D., M.D.
LANCASTER, Lancaster County.
Snyder, Elwood S., M.D., 425 North Queen Street.
LANGHORN, Bucks County.
Heritage, Joseph B., M.D.
LEWISTOWN, Mifflin County.
Griffith, John B., M.D.
LINESVILLE, Crawford County.
Collins, Allen Bennett, M.D.
McKEESPORT, Allegheny County.
Burlingame, Frank W., M.D.
MEADVILLE, Crawford County.
Parsons, Edgar C., M.D.
MEDIA, Delaware County.
Pratt, Trimble, M.D.
MT. MORRIS, Greene County.
Bradford, George M., M.D.
NEW BRIGHTON, Beaver County.
Boyd, John S., M.D.
Pettit-Roberts, Evelyn Sarah, M.D., 1109 Third Avenue.
NEW CASTLE, Lawrence County.
Sankey, B. E., M.D., 56 South Jefferson Street.
NORRISTOWN, Montgomery County.
NORWOOD, Delaware County.
Baier, George F., M.D.
OAKMONT, Allegheny County.
Cooper, William Henry, M.D.
OIL CITY, Venango County.
Curran, Edwin J., M.D.
Sellew, Sylvester Wolcott, 17 Center Street.
PHILADELPHIA, Philadelphia County.
Adams, Theodore Lewis, M.D., 1831-33 Chestnut Street.
Allen, John V., M.D., 4637 Frankford Avenue.
Allen, Richard C., M.D., 4419 Frankford Avenue.
Arthur, Alexander Beck, M.D., 2039 Spring Garden S

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Ashcraft, Leow Thomas, M.D., 833 Chestnut Street.
Baker, Wm. Franklin, M.D., 2131 East Cumberland Street.
Bartlett, Clarence, M.D., 1506 Arch Street.
Belville, Jacob Edgar, M.D., 5915 Green Street.
Berens, Joseph, M.D., 1500 Green Street.
Betts, B. Frank, M.D., 1609 Girard Avenue.
Bibighouse, James Russell, 2156 Natrona Street.
Bigler, William H., M.D., 118 North Seventeenth Street.
Boericke, Felix A., M.D., 1011 Arch Street.
Boileau, John D., M.D., 804 Lehigh Avenue.
Bradford, Thomas L., M.D., 1862 Frankford Avenue.
Branson, Mary, M.D., 1719 Arch Street.
Brewer, Mary, M.D., 330 East Chelton Avenue, Germantown.
Brown, Christian H., 1022 Walnut Street.
Brunner, Edgar P., M.D., 1108 Spring Garden Street.
Carmichael, Thomas H., M.D., 7127 Germantown Avenue, Germantown.
Carter, Woodward D., M.D., 1311 South Broad Street.
Chase, Theodore Livingston, M.D., 1604 Walnut Street.
Christine, Gordon M., M.D., 2043 West Twelfth Street.
Closson, James H., M.D., 53 West Chelton Avenue, Germantown.
Cloud, Charles Higginson, M.D., 5738 Market Street.
Cooke, Mary A., M.D., 2113 North Eighteenth Street.
Culin, William Davis, M.D., 855 North Forty-first Street.
Dudley, Pemberton, M.D., 1405 North Sixteenth Street.
Ealer, Percy H., M.D., 815 North Twenty-fourth Street.
Fischer, J. A., M.D., 505 Green Street.
Furman, Horace S., M.D., 1705 Tioga Street.
Gilbert, Irwin B., M.D., 2027 Columbia Avenue.
Goodno, William C., M.D., 1733 Chestnut Street.
Gramm, Theodore J., M.D., 846 North Broad Street.
Griffith, Lewis B., M.D., 2449 Columbus Avenue.
Gross, Francis O., M.D., 1506 North Seventh Street.
Guernsey, Joseph C., M.D., 1923 Chestnut Street.
Gumpert, Benjamin B., M.D., 840 Franklin Street.
Haines, Oliver Sloan, M.D., 137 North Fifteenth Street.
Hancock, Elmer E., M.D., 1443 North Seventeenth Street.
Hancock, Joseph, M.D., 1639 Columbia Avenue.
Hartley, Arthur, M.D., 2109 West Susquehanna Avenue.
Hassler, J. Wyllis, M.D., 1503 Poplar Street.
Humphrey, Edward, M.D., Somerton.
James, D. Bushrod, M.D., 2005 North Twelfth Street.
James, John E., M.D., 1521 Arch Street.
Johnson, Maria N., M.D., 109 South Twentieth Street.
Jones, John J., M.D., 1802 Mount Vernon Street.
Jordan, Oscar J., M.D., 704 Suydam Avenue.
Karsner, Charles W., M.D., 1320 South Broad Street.
Kase, Edmund Harris, M.D., 1325 Girard Avenue.
Knerr, Calvin B., M.D., 1831 Chestnut Street.
Knowlton, William Waldo, M.D., 113 South Sixteenth Street.
Korndoerfer, Augustus, Jr., M.D., 1728 Green Street.
Korndoerfer, Augustus, M.D., 142 North Eighteenth Street.
Krewson, Amos D., M.D., 4613 Paul Street, Frankford.
Kurtz, Alfred J., M.D., 1520 South Broad Street.
Layman, Alfred, M.D., 1630 North Eighteenth Street.
Leopold, Herbert Preston, M.D., Germantown.
Lichtenwalner, Abbott B., M.D., 2435 North Seventh Street.
Macfarlan, Duncan, M.D., 3924 Chestnut Street.
Macfarlan, Malcolm, M.D., 1805 Chestnut Street.
Mackenzie, George W., M.D., Somerton.
McClure, Eliza Lang, M.D., 1919 Wallace Street.
Mansfield, Harry Knox, M.D., 19 West Chelton Avenue, Germantown.
Marshall, Anna M., M.D., 1420 Chestnut Street.

Martin, Robert Wilkie, M.D., 1831 Chestnut Street.
Mercer, Edward W., M.D., 1705 Arch Street.
Middleton, Caleb S., M.D., 1523 Girard Avenue.
Mitchell, John Nicholas, M.D., 1505 Spruce Street.
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Myers, Charles E., M.D., 170 Green Lane, Manayunk.
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Plincher, Wm. Allen, 5915 Walker Street.
Palen, Gilbert Joseph, M.D., Germantown.
Paxon, Oliver H., M.D., 1733 Arch Street.
Pettengill, Eliza F., M.D., 300 North Tenth Street.
Posey, Louis Plumer, M.D., 1435 Walnut Street.
Raue, C. Sigmund, M.D., 121 North Tenth Street.
Reading, J. Herbert, M.D., 1811 Green Street.
Reeves, Joseph M., M.D., 1525 Spruce Street.
Ridge, Jonathan T., M.D., 1617 North Seventh Street.
Ridgway, Mary Davis, M.D., 5336 Wayne Avenue.
Russell, Antoinette E. C., M.D., 5348 Wayne Avenue, Germantown.
Sartain, Harriet J., M.D., 212 West Logan Square.
Schreiner, Emma T., M.D., 190 Maplewood Avenue.
Schwenk, Clayton S., M.D., 1319 Jefferson Street.
Shannon, S. F., M.D., 802 North Sixty-third Street.
Shellenberg, Charles Neil, M.D., 1831 Wallace Street.
Smilie, Nathan, M.D., 1524 Chestnut Street.
Snader, Edward R., M.D., 1919 Arch Street.
Spencer, William, M.D., 1820 Chestnut Street.
Stewart, George W., M.D., 1728 Chestnut Street.
Thomas, Charles M., M.D., 1623 Arch Street.
Thompson, Landreth W., M.D., 1701 Green Street.
Tindall, Percy A., M.D., 323 Reed Street.
Tomlin, Richard Elmer, M.D., 207 North Eighth Street.
Tuller, John J., M.D., 1931 Chestnut Street.
Van Baun, William W., M.D., 1402 Spruce Street.
Van Deusen, Edwin H., M.D., 2105 Tioga Street.
Van Lennep, Gustave Adolphe, M.D., 1421 Spruce Street.
Van Lennep, William B., M.D., 1421 Spruce Street.
Wait. Oliver B., M.D., 1230 South Fifty-seventh Street.
Ward, John McE., M.D., 1915 Susquehanna Avenue.
Waylan, Julia Gould, M.D., 1832 Tioga Street.
Weaver, Chandler, M.D., Fox Chase P. O.
Weaver, Harry Sands, M. D., 1621 Chestnut Street.
Williamson, Matthew S., M.D., 1311 Arch Street.
Wurtz, Charles B., 2413 North Fifth Street.
Yale, Arthur Wells, M.D., 1901 Park Avenue.
Zeigenfus. A. Frank, M.D., 1124 Wallace Street.

PITTSBURG. Allegheny County.

Bier, Peter A., M.D., 4200 Butler Street.
Bingaman, C. F., M.D., 922 Penn Avenue.
Blair, William Wightman, M.D., 406 Penn Avenue.
Chapman, Millie J., M.D., 321 Smith Block, Sixth Street.
Cook, W. Casper, 501 Bijou Building.
Edmundson, Walter F., M.D., 1321 Fifth Avenue.
Elliott, John D., M.D., Homœopathic Hospital.
Fulton, Henry W., M.D., corner Ripley and Highland Avenr
French, Malachi R., M.D., 627 Smithfield Street.
Gangloff, C. L., M.D., Virginia Avenue and Maple Terrace
Gregg, Edw. R., M.D., 34 South Highland Avenue.
Herron, Charles D., M.D., 3505 Butler Street.
Hofmann, Charles H., M.D., 510 South Highland Avenr
Johnson, Anna, 5115 Liberty Avenue.
King, Wm. D., M.D., 1046 Fifth Avenue.

PENNSYLVANIA—Continued

Marshall, Robert S., M.D., 424 Shady Avenue.
Martin, W. J., M.D., 1712 Carson Street, S.S.
McClelland, James H., M.D., Fifth and Wilkins Avenue.
McClelland, John B., M.D., 409 Penn Avenue.
McClelland, Robert Watson, M.D., Fifth and Wilkins Avenue.
Miller, Zachary T., M.D., 2013 Carson Street.
Moreland, Geo. B., M.D., 403 Smith Block.
Mueller, Gustave A., M.D., 400 Penn Avenue.
Sawers, Frank C., 5208 Second Avenue.
Seip, C. P., M.D., 636 Penn Avenue.
Stewart, Wm. A., 105 North Dallas Avenue.
Thompson, James Henry, M.D., 515 Penn Avenue.

PITTSTON, Luzerne County.
Johnson, Theodore M., M.D., 200 Susquehanna Avenue.

PLYMOUTH, Luzerne County.
Saudel, John H., M.D.

POTTSTOWN, Montgomery County.
Rossiter, Edwin B., M.D., 343 High Street.
Shute, Albert Clement, M.D., 421 High Street.

POTTSVILLE, Schuylkill County.
Boyer, Francis W., M.D.

READING, Berks County.
Kline, David C., M.D.
Schantz, M. Margaret Hassler, M.D., 402 North Fifth Street.
Schollenberger, Lewis A., M.D., 637 Walnut Street.

RENOVO, Clinton County.
Heimbach, Allen Eugene, M.D., 125 Sixth Street.

ROCHESTER, Beaver County.
McCauley, John C., M.D., 320 Connecticut Avenue.

SCRANTON, Lackawanna County.
Coolidge, John W., M.D., 334 Washington Street.
Heilner, Herbert Franklin, M.D., Burr Building.
Peck, John Lyman, M.D., 322 Washington Street.
Roberts, Charles W., M.D., 638 Washington Avenue.
Ware, Horace B., M.D.

SHARPSBURG, Allegheny County.
Dinsmore, Samuel W. S., M.D.

SHARON, Mercer County.
Walker, Hannah Ellen, M.D., 24 Shenango Street.

SHIPPENSBURG, Cumberland County.
Brown, Samuel G. A., M.D., Lock Box 99.

SPRINGBORO, Crawford County.
Parsons, Anson, M.D.

SUSQUEHANNA, Susquehanna County.
Simmons, Silas S., M.D.

TITUSVILLE, Crawford County.
Burchfield, Samuel Newton, 39 East Main Street.
Sager, Cyril Wichfield, M.D., 108 West Main Street.

UNION CITY, Erie County.
Stem, Henry L., M.D.

UNIONTOWN, Fayette County.
Hemington, J. G., M.D., 87 West Main Street.
Bowie, Alonzo P., M.D., 87 Main Street.

WARREN, Warren County.
Davies, Geo. A., 309 Liberty Street.
Davies, J. Norman, 209 Third Street.

WALTER'S PARK, Berks County.
Walter, Robert, M.D.

WASHINGTON, Washington County.
Maurer, Joseph M., M.D., 59 West Wheeling Street.

WAYNE, Delaware County.
Smedley, Charles Davis, M.D.

PENNSYLVANIA—Con

WEST ALLEGHENY, Penn.
Goff, Ella D., M.D., 10 North Diamond Stre

WAYNESBURG, Greene County.
Blair, Thos. L., M.D.

WEST PHILADELPHIA.
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WILKESBARRE, Luzerne County.
Bullard, J. Arthur, M.D.

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Varner, Anna Devinn, M.D., 613 Wood Stree

WILLIAMSPORT, Lycoming County.
Reinhold, Hannah C., M.D., 761 West Fourth

YORK, York County.
Crawford, Katherine M., M.D., 304 East Ma
Dehoff, John W., M.D., 453 West Market St

RHODE ISLAND.

BLOCK ISLAND, Newport County.
Champlin, John Carder, M.D.

BRISTOL, Bristol County.
Gooding, Gertrude, M.D.
Hasbrouck, Cornelius J., M.D., Hope Street.

CENTERDALE, Providence County.
Barnard, Charles A., M.D.

EAST PROVIDENCE, Providence County.
Allison, George Freeman, M.D., Warren Ave

OLNEYVILLE, Providence County.
Lippitt, Louis Davis, M.D., 41 Pocasset Ave

PAWTUCKET, Providence County.
Bennett, John Hillman, M.D., 306 High Stree
Phillips, Emma A., M.D.

PROVIDENCE, Providence County.
Arnold, Oliver Henry, 275 Washington Stree
Brown, Asa W., M.D., 27 Burnett Street.
Brown, Lucy H. A., M.D., 68 Jackson Street.
Budlong, John Clark, M.D., 604 Westminster
Budlong, Martin S., M.D., 604 Westminster
Caldwell, Wm., M.D., 7 John Street.
Crocker, Harry Clinton, M.D., 194 Smith Str
Green, Charles L., M.D., 16 Jackson Street.
Hall, Robert, M.D., 60 Cranston Street.
Hasbrouck, Sayer, M.D., 105 Broad Street.
Hunt, Annie W., M.D., 217 Washington Stre
Lance, John D., M.D., 27 Broadway.
Kenyon, Frances Aureola, M.D., 865 North M
Moss, Mary Denison, M.D.
Peck, George Bacheler, M.D., 865 North Mai
Phillips, Robt. S., 62 Jackson Street.
Sanger, Henry Mortimer, M.D., 1040 Westm
Sawin, Isaac W., M.D., 582 Broadway.
Shipman, Thomas Harris, M.D., 281 Benefit S
Stone, Waldo H., M.D., 73 Common Street.
Whitmarsh, Henry Allen, M.D., 62 Jackson S
Wood, A. V., M.D., 483 Elmwood Avenue.

WESTERLY, Washington County.
Pagan, Frank C., M.D.
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Reed, Robt. G., M.D.

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ABERDEEN, Brown County.
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Cotton, Alonzo A., M.D.

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Dake, Walter M., M.D., 218 North Vine Street.
Dake, William C., M.D., 218 North Vine Street.
McGavock, Clara Plimpton, M.D.

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DALLAS.
Thatcher, William F., M.D., 411 Linz Building.
West, Isaac C., M.D., 350 Elm Street.
DENISON, Grayson County.
Warren, H. Anna, M.D., 817 Bond Street.
FORT WORTH, Tarrant County.
Pollock, Joseph Robert, M.D.
GAINESVILLE, Cooke County.
Stiles, Hunter Bell, M.D., Grand Avenue.
GALVESTON, Galveston County.
Mercer, William M., M.D., 1815 Church Street.
SAN ANTONIO, Bexar County.
Watts, Edith Gertrude, M.D., Hicks Building.
Wilson, Chas. A., 313 Houston Street.
TEXARKANA, Texas County.
Williams, Perry C., M.D.
VERNON, Wilbarger County.
Blackman, George Edwin, M.D.
WACO, McLellan County.
Streeter, Geo. Dallas, M.D., 216 North Fifth Street.

UTAH.

OGDEN, Weber County.
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SALT LAKE CITY, Salt Lake County.
White, John T., M.D., 28 State Street.

VERMONT

BELLOWS FALLS, Windham County.
Kirkland, Edward, M.D.
BRADFORD.
Smith, E. T., Jr., M.D.
BURLINGTON, Chittenden County.
Colvin, Harvey E., M.D., 150 Cherry Street.
Sparhawk, George E. E., M.D.
FAIRHAVEN.
Clift, E. B., M.D.
MANCHESTER CENTRE, Bennington County.
Wymond, Edmond L., M.D.
MIDDLEBURY, Addison County.
Harter, Frank Dexter, M.D.
Noble, Daniel Cook, M.D.

NEWPORT, Orleans County.
Whitacre, Eugene E., M.D.
ROCHESTER, Windsor County.
Richardson, E. B., M.D.
RUTLAND, Rutland County.
Gale, Charles A., M.D.
Hudson, Walter G., 65 Grove Street.

VIRGINIA

DANVILLE, Pittsylvania County.
Koens, Harry E., M.D., 647 Main Street.
HOT SPRINGS, Bath County.
Williams, E. C., M.D.
NEWPORT NEWS, Warwick County.
Jackson, Noah, M.D., 125 Twenty-eighth Street.
NORFOLK, Norfolk County.
Allen, M. R., M.D.
Webster, Frank P., M.D., 316 Freemason Street.
RICHMOND, Henrico County.
Bagby, George Franklin, M.D., 206 East Grace Street.
Baker, Harry Burgwyn, M.D., 1 East Grace Street.
Taber, George A., M.D., 105 West Grace Street.

WASHINGTON

SEATTLE, King County.
Churchill, Frederick A., M.D., 524 Burke Building.
Hastings, Wm. C., M.D., Dorrn's Block.
Maxwell, Geo. B., M.D.
Young, E. Weldon, M.D., 1023 Columbia Street.
SPOKANE, Spokane County.
Chandler, Jean Christie, M.D., 402 Traders' Building.
Grove, Charles E., M.D., Hyde Block.
Olmstead, Elmer D., M.D.
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CHARLESTON, Kanawha County.
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CLARKSBURG.
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MORGANTOWN, Monongalia County.
Casselberry, Melvin L., M.D.
PARKERSBURG, Wood County.
Muhleman, Charles, M.D., 611 Market Street.
WELLSBURG, Brooke County.
Roberts, Arthur Augustine, M.D.
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Morris, John W.
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WISCONSIN

APPLETON, Outagamie County.
Kanouse, Abijah W., M.D.
BEAVER DAM, Dodge County.
Webb, William B., M.D.
BELOIT, Rock County.
Van Delinder, Effie M., M.D., 556 Public Avenue.
BLACK RIVER FALLS, Jackson County.
Abbott, Edward C., M.D., Main Street.

WISCONSIN—Continued

COLUMBUS, Columbia County.
Peck, Harry G., M.D.
EDGERTON.
Martin, Frederick H.
GREEN BAY, Brown County.
Olmstead, Austin Frederick, M.D.
KENOSHA, Kenosha County.
Adams, George F., M.D.
Erwin, William, M.D.
Pennoyer, Nelso A., M.D.
Ripley, George H., M.D.
LANCASTER, Grant County.
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MADISON, Dane County.
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MANITOWOC, Manitowoc County.
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MILWAUKEE, Milwaukee County.
Barndt, Milton A., Grand Avenue and Third Street.
Beebe, Eugene W., M.D., 173 Wisconsin Street.
Carlson, Oscar W., M.D., 425 Milwaukee Street.
Forsbeck, Filip A., M.D., 121 Wisconsin Street.
Irving, Walter W., M.D., 121 Wisconsin Street.
Johnson, Solomon D., M.D., 204 Grand Avenue.
Lewis, Joseph, M.D., 330 National Avenue.
Sherman, Lewis, M.D., 171 Wisconsin Street.
RACINE, Racine County.
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SHARON, Walworth County.
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Suttle, Henry J., M.D.
WEST LIMA, Richland County.
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WEST SUPERIOR, Douglas County.
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WHITEWATER, Walworth County.
Leland, Aaron G., M.D.

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